THE UNITED STATES DEPARTMENT OF AGRICULTURE 1 2 In the Matter of:) 3) MILK IN THE NORTHEAST AND 4) 5 OTHER MARKETING AREAS) 6 Virginia Room A 7 Embassy Suites Hotel 8 1900 Diagonal Road 9 Alexandria, Virginia 22319 10 Tuesday, 11 May 9, 2000 12 The hearing in the above-entitled matter was 13 convened, pursuant to notice, at 8:03 a.m. 14 BEFORE: HONORABLE JAMES W. HUNT 15 Administrative Law Judge 16 APPEARANCES: 17 On Behalf of the USDA: 18 GREGORY COOPER, Esquire 19 Office of General Counsel 20 CONSTANCE M. BRENNER 21 CAROL S. WARLICK 22 Dairy Marketing Specialist, Dairy Programs 23 Agricultural Marketing Service HENRY H. SCHAEFER 24 25 Chief Agricultural Economist 26 Federal Milk Market Administration 27 Minneapolis, Minnesota 28 29 30 31

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2	EXHIBITS	S: IDENTIFIED	RECEIVED	DESCRIPTION
3	Ex. 14	(5/8)	341	Dr. Yonkers' written
4				testimony with
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10	Ex. 17	527		Spreadsheet prepared
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1 PROCEEDINGS 2 (8:03 a.m.) JUDGE HUNT: Good morning, ladies and gentlemen. 3 4 I understand the amplification system is down temporarily. 5 You all have copies of Mr. Yonkers' testimony. So you can read as well as hear him. It should be fixed shortly. But б 7 if you have problems hearing anything, just raise your hand 8 or shout out and we will repeat anything that you need to 9 hear. 10 At the break, come up to me and see me if there is 11 anybody here who has to testify today under time restraints, 12 that need to be taken out of order, that need to testify 13 today. Let me know and we will fit you in to make sure that 14 you do have an opportunity to testify today. We will do 15 that at the break. 16 Also at the back of the room at the break, too, we 17 have the sign-in sheet for those who want to sign in 18 indicating in the record that they were present at the 19 hearing. So the sign-in tablet is at the back room where 20 the exhibits are. 21 All right. Now, we have Mr. Yonkers who will --22 is there anything preliminarily before we begin to resume 23 Mr. Yonkers' testimony? All right, then. Mr. Yonkers. 24 Whereupon, 25 ROBERT YONKERS, Ph.D.

1 having been previously duly sworn, resumed the 2 stand and further testified as follows: 3 THE WITNESS: Okay. On page 54 of my testimony, 4 Roman numeral X, Product price formulas reflect AMAA 5 requirements and should not be replaced by cost of б production formulas. The product price formulas contained 7 in the final rule reflect the supply and demand factors in paragraph 608(C)(18) of the AMAA and should not be replaced 8 9 by a formula based upon the cost of production. 10 In the early 1960s, the Secretary adopted the use 11 of the Minnesota-Wisconsin, or MW, price as the Class III 12 price. The MW was a competitive pay price obtained from a 13 survey of payments made by manufacturing plants in Minnesota 14 and Wisconsin to producers of Grade B or manufacturing grade 15 milk. 16 The MW price was correctly regarded by the 17 Secretary as an adequate accurate indicator of the 18 multiplicity of supply and demand factors affecting market prices for Grade A milk throughout the country. This was so 19 20 because 1) the price of Grade B milk was not and is still not regulated, but determined by open competition; 2) 21 22 manufactured products were and still are less perishable 23 than fluid milk and, thus, tend to compete on a national rather than local level; and 3) supply and demand factors 24

25 affecting the price of Grade A and Grade B milk were closely

1 correlated.

2	The Secretary concluded that the MW price
3	automatically incorporates excuse me, quote,
4	"Automatically incorporates the effects of enumerable
5	economic factors which have an impact on both buyers and
6	sellers including the price and availability of feed for
7	dairy cows", and that it, thus, "reflects all of the supply
8	and demand conditions that must be considered" under Section
9	18 of the AMAA.
10	I agree with that assessment. I also understand
11	that the use of a market-driven base price to automatically
12	account for the Section 18 factors was expressly approved by
13	the 8th Circuit Court of Appeals in The Minnesota Milk
14	Producers versus Glickman case. However, structural changes
15	over time in the dairy industry made the MW less
16	representative of the value of milk used in manufactured
17	dairy products.
18	These changes were most notably the declining
19	volume of Grade B milk produced and the declining number of
20	manufacturing plants from which payments could be reported
21	to USDA. The latter was addressed by USDA in 1995 following

a national Federal Order hearing in 1992 by using an
updating formula which used changes from month to month in
the wholesale prices of butter, nonfat dry milk and cheese.

25 The updating procedure adopted in May 1995

resulted in the basic formula price, or BFP, which replaced the MW in nomenclature, but still relied on the base month portion of the MW series. This addressed the problem of the MW price no longer representing a competitive market price resulting from having too few manufacturing plants that purchase Grade B milk.

7 This updating procedure relied on the competition 8 for manufactured dairy products at the wholesale level, the 9 next step in the marketing chain above the purchase of raw 10 milk. It was noticed by USDA in its 1995 decision that, 11 "The adoption of the base month MW price for any Grade B 12 milk series is only a short-term solution since the amount 13 of Grade B milk production is expected to continue to 14 decline."

15 The product price formulas adopted in the final rule as a replacement for the BFP continued to rely on the 16 17 well established principle of milk marketing pricing that had been incorporated in both the MW and the BFP. The final 18 19 rule accurately states that, "The pricing system contained 20 in this decision will function in the same manner as the current pricing system by accounting for changes in feed 21 22 costs and feed supplies indirectly."

23 The new Federal Order Pricing System actually
24 better captures local feed prices than do the old order
25 pricing system. This is because the old order prices were

derived from data of whole milk purchases by processors in
 Minnesota and Wisconsin only. In contrast, the new orders
 utilized nationwide data and thus better reflect the price
 of feed in all regions of the country.

5 As I have previously noted, the component based 6 product price formulas for determining minimum prices for 7 milk beginning January 2000 follow a basic formula as 8 follows: the wholesale price of the dairy product minus the 9 cost of manufacturing that product divided by a yield factor 10 where the cost of manufacturing is represented by a make 11 allowance.

12 In the final rule, USDA noted that, "Product 13 prices established in a relatively free and open interaction 14 between supply and demand directly translate the value of 15 the finished products to the value of milk and its 16 components. Therefore, they have a sound, economic 17 underpinning."

The application of product price formulas specifying which product prices make allowance in yield factors to use. In the past, the implicit make allowance received by each manufacturing plant was equal to the difference between the wholesale value received for the dairy product minus the value paid for the raw milk used to make that dairy product.

This varied over time based on many economic

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1 factors such as the capacity utilization of the plant,

variability in the cost of inputs other than raw milk like wage rates, energy costs and interest rates, and, of course, the competitive environment for raw milk.

5 while this implicit make allowance varied from 6 month to month, over time the implicit make allowance had to 7 consistently cover the full cost of operating the 8 manufacturing plant. That same function is now achieved 9 through the make allowance as specified in the product price 10 formulas.

11 The cost of production approach to minimum milk 12 prices, proposal number 29, achieves none of these goals and 13 should be rejected. It was previously rejected in the 14 informal rule-making leading to the final rule. As noted in 15 the proposed rule, the reason the USC, University Study 16 Committee, dropped cost of production from consideration was 17 that cost of production represents only the supply side of 18 the market, ignoring factors underlying demand or changes in 19 demand for milk and milk products.

That assessment is right on target. The price a farmer receives tells him how much milk to produce. When demand for dairy products rise, the price of milk must rise to signal to the farmer to produce more milk. If demand falls, the price of milk must fall in order to send the opposite signal. Basing the price paid to farmers only on the cost of production fails to reflect any demand side
 inputs and therefore fails to fully account for these
 critical functions.

11) USDA should issue a recommended decision. 4 5 USDA's normal practice is to issue a recommended decision б and receive written comments before issuing a final 7 decision. That procedure should be followed here. A 8 recommended decision can be omitted only if the record 9 evidence demonstrates that "due and timely execution of the 10 Secretary's functions imperatively and unavoidable require 11 such an omission as stated in the Code of Federal 12 Regulations."

13 These conditions do not exist here. The milk 14 industry does not face any emergency situations. The final 15 rule, although subject to improvements as outlined in my 16 testimony, is functioning appropriately. The prerequisites 17 to the omission of a recommended decision are not present 18 and furthermore while Congress has required that any changes 19 resulting from the hearings be published by December 1, 2000 20 and implemented by January 1, 2001, there should still be ample time for the Department to issue a recommended 21 22 decision first.

A recommended decision is particularly desirable
in light of the recent experience in the informal rulemaking that led to the final rule. The ability of

interested persons to provide written comments on the proposed rule provided an opportunity to point out some significant shortcomings in the regulatory provisions under consideration and in many cases led to significant improvements in the final rule as adopted by USDA. The same opportunity should be afforded here.

7 MR. ROSENBAUM: All right. Dr. Yonkers, you have 8 an appendix or an addendum which we are not going to have 9 you read into the record which I think will disappoint no 10 one in this room. But I think you have a quite short 11 addition to give to your testimony. Could you do that now? 12 THE WITNESS: Yes. Earlier in my testimony 13 yesterday, I implied that the butterfat and anhydrous milk 14 fat -- that butter and anhydrous milk fat were both Class IV 15 products. For reasons not explained by USDA in the final 16 rule, butter is the only one of several products which 17 compete in the marketplace as a source of butterfat for 18 further processing including plastic cream, butter oil and 19 anhydrous milk fat to be included in Class IV. The others 20 are Class III products. Proposal number 8, in addition to significantly 21

changing the input cost between buyers of raw milk for Class IV and II who compete for the same milk supply also significantly will reduce the raw milk component costs for the manufacturers of butter relative to those manufacturing 1

plastic cream, butter oil and anhydrous milk fat.

2 EXAMINATION BY PARTICIPANTS 3 BY MR. ROSENBAUM: 4 All right. Dr. Yonkers, yesterday before anyone Q 5 had testified, I noted that the notice published in the Federal Register had accurately described proposal number 12 б 7 which is a proposal by the trade association for which you 8 are employed; but that the language used to set forth in the 9 proposal -- excuse me, set forth in the notice to carry out the proposal, that proposal was not quite accurate. 10 11 Could you please for the record describe what the 12 correct language should be? 13 Yes. Proposal number 12, as correctly summarized Α 14 by USDA in its first paragraph under where it starts 15 proposal number 12 was to reflect the price adjuster for 16 500-pound barrels and 640-pound blocks that is made to the 17 NASS dairy products prices reported price to reflect the 18 actual cost of manufacturing difference between 40-pound 19 blocks and those other size package cheeses. 20 In developing the language, USDA instead used the price difference. And as I stated earlier in my testimony, 21 22 that price difference between blocks and barrels consists of 23 two components. One is the actual difference in the cost of manufacturing those two and the other is related strictly to 24 25 the moisture adjustment. And separating those out we

1 believe is very important for consideration by the USDA. 2 And so the correct reference is not to the 0 3 difference in the price, but the difference in the cost of 4 manufacturing? 5 А That's correct. б A substantial portion of your testimony addressed 0 7 the question of the appropriate make allowance to use for 8 cheese and dry whey, is that correct? 9 А That is correct. 10 0 And with respect to cheese -- well, with respect 11 to both products, the National Cheese Institute which is 12 part of the International Dairy Foods Association, conducted 13 a survey of the membership to determine cost of production, 14 correct? That is correct. 15 А 16 And you have provided those numbers. 0 17 А Yes, I have. 18 And there also have been numbers introduced into 0 evidence from the most recently completed survey of the 19 20 Rural Business Cooperative Service, correct? 21 А Yes. 22 Q Now -- and those I think are Exhibit 9 if I am not 23 mistaken that have been introduced into evidence through the 24 testimony of Dr. Ling yesterday. Do you have some concerns 25 as to the accuracy -- let me back up. In your testimony,

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you identified a number of cost factors that are not

- 2 reflected in that survey, correct?
- 3 A That is correct.

4 Q And you believe the survey is inappropriate for 5 that reason, correct?

6 A That is correct.

7 Q And you also identified the fact that it didn't8 cover proprietary plants.

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9 A That is correct.
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Q Do you have any -- having now seen the numbers for the first time as a result of their having come out through this hearing, do you have some concerns as to the accuracy or reliability of the cheese numbers reflected in the rural business cooperative service survey?

15 A When -- the most striking thing about the cheese 16 numbers was that the weighted average was higher than the 17 simple average. And that was not the case for either the 18 butter or the nonfat dry milk. As a matter of fact, the 19 weighted average was significantly lower.

20 Due to the huge differences in size of plants and 21 efficiency of plants across the country, it is a commonly 22 accepted economic principle due to economies of size and 23 scale that larger plants have lower costs of manufacturing. 24 And it just struck me as being very unusual for the Rural 25 Business Cooperative Service weighted average cheese cost of 1

manufacturing to be higher than the simple average.

2 And what -- there is another survey done by the 0 3 California Department of Food and Agriculture, correct? 4 Yes, that is correct. Α 5 0 And what did that show for cheese in terms of the б relationship between the average cost and the weighted 7 average cost? 8 Consistent with theory, the weighted averages were А 9 all lower than the simple averages. 10 0 And is there any way that you could have a 11 weighted average that is higher than the simple average 12 other than that the larger plants are allegedly operating at 13 higher costs than the smaller plants? 14 А I don't see statistically or mathematically how 15 that could have -- you could arrive at that conclusion 16 unless those larger plants had higher costs of manufacturing 17 on average. 18 So that the Rural Business Cooperative survey 0 19 results would necessarily as a matter of simple mathematics 20 be saying that the larger plants have higher costs of production than the smaller plants, correct? 21 22 А That is correct. 23 0 And that is inconsistent with the California 24 results? 25 А That is correct.

1 0 It is inconsistent with the Rural Business 2 Cooperative survey results for butter and nonfat dry milk? 3 А That is correct. And it is inconsistent with the normally accepted 4 Q 5 principle that the larger plants are, in fact, the more б efficient plants, correct? 7 That is correct. А 8 MR. ROSENBAUM: Okay. Your Honor. At this point, 9 I would move Exhibit 14 into evidence, although I understand 10 there may be some questions to the Witness before that is 11 formally acted upon. JUDGE HUNT: I will reserve until after the 12 13 questions to rule on this. 14 MR. COOPER: What is 14? 15 JUDGE HUNT: Fourteen is his testimony. 16 MR. COOPER: The whole testimony? 17 JUDGE HUNT: The whole testimony including the 18 appendix, yes, Mr. Rosenbaum? MR. ROSENBAUM: Your Honor, the whole document. 19 20 That's right. 21 JUDGE HUNT: Mr. Cooper? 22 MR. COOPER: I guess the problem we run into 23 sometimes is the testimony as given doesn't always exactly 24 match the testimony as written, usually because somebody, 25 you know, made a mistake somewhere along the way or changed

1 the testimony.

2	JUDGE HUNT: Well, he everyone followed along
3	as he testified. Has anybody seen any variation to his
4	testimony and what is in the written testimony?
5	MR. COOPER: And, therefore, I was going to say we
6	usually don't clutter the record by putting in testimony
7	that has already been testified to.
8	JUDGE HUNT: Well, I will accept it if there is no
9	objections to his testimony as an exhibit.
10	MR. COOPER: Well, I am objecting.
11	JUDGE HUNT: All right. You are objecting. All
12	right.
13	MR. COOPER: I mean, as a general rule for the
14	whole hearing, not just his testimony. But if everyone is
15	going to read them in, there doesn't seem to be any sense in
16	receiving them as exhibits. On the other hand, if they are
17	going to just put them in as exhibits as if read, we could
18	just pass them out and everybody go off and read in the
19	corner for three hours. We've done it either way in past
20	hearings. It just doesn't seem to make sense to be
21	duplicative.
22	JUDGE HUNT: Well, your only objection then is it
23	just clutters up the record.
24	MR. COOPER: That is the first one as to the
25	testimony.

JUDGE HUNT: Okay. The first one. The second is 1 2 the variation to his testimony and --3 MR. COOPER: Well, no, as to his testimony, that 4 is my objection. 5 JUDGE HUNT: All right. б MR. COOPER: That it is duplicative and, you know, 7 we are starting off here with the first -- you know, or second witness actually. The first one had a prepared 8 9 testimony distributed like this and wished to have it 10 received. So I am just trying to set where we are going for 11 the rest of this hearing for the next four days. 12 JUDGE HUNT: Mr. Rosenbaum? 13 MR. ROSENBAUM: Well, there -- from my experience 14 in many of these hearings, we have entered the entire 15 testimony. Beyond that, Dr. Yonkers' written testimony 16 incorporates in the text itself the critical tables on make 17 allowances and things like that which he, of course, did not 18 read into the record. So that is how the entire testimony has to come in for those tables to come in which is 19 20 absolutely critical from our perspective. JUDGE HUNT: I will admit Exhibit 14 including the 21 22 tables. Yes, Mr. Cooper? 23 MR. COOPER: Once we get beyond the testimony, the appendix is nothing but a legal argument. And this is a 24 25 fact-finding hearing. So a) it doesn't belong and b) even

1 if it conceivably could belong, Dr. Yonkers may be a 2 wonderful economist. But there is nothing in his 3 credentials that is indicated in the beginning or even in 4 the merits of his legal argument to show that he is 5 qualified to -б JUDGE HUNT: Well, that is being offered. I 7 assume that anyone here can question about the analysis as 8 well as about his testimony. 9 MR. COOPER: I mean, that certainly belongs in the 10 brief, not in the testimony. MR. ROSENBAUM: Well, we wanted to have it all up 11 12 front so no one could say they didn't have notice as to what 13 our position was. 14 JUDGE HUNT: I will admit the testimony including 15 the analysis and tables. Exhibit 14 is admitted into 16 evidence. Now, with -- on the matter of the testimony -- of 17 testimony that Mr. Cooper referred to, it is introduced 18 without testifying as if read. 19 If there has been testimony prepared that has been 20 given to the other participants here or the people attending here today in advance, that they are already familiar with 21 22 the testimony, I think in that circumstance it could be 23 introduced as if read without having to re-read it at the 24 hearing.

25 It will shorten the time here. That is only for

1 that testimony which has been reduced to writing. It has 2 been made available ahead of time. So if you do have that, 3 we can shorten the hearing. But that is only under those 4 circumstances. All right. Then any questions of Dr. 5 Yonkers. Mr. Beshore. (The document marked for б 7 identification as Exhibit No. 8 14 was received in evidence.) BY MR. BESHORE: 9 10 0 Good morning, Dr. Yonkers. 11 А Good morning. 12 MR. BESHORE: At the outset, Your Honor, I would 13 like to just reiterate the and perhaps clarify the objection 14 I made yesterday to portions of the testimony relating to 15 the formulas for Class I and Class II prices. This hearing 16 was not called in the Secretary's -- pursuant to the 17 Secretary's general or generic authority to formulate all of 18 the regulations for milk marketing orders, but was called specifically, as the notice said, pursuant to the mandate in 19 20 the legislation of last fall which specifically and exclusively addresses Class III and Class IV prices. 21 22 We have got our plate full with Class III and 23 Class IV price formulas in this hearing. And we do not need 24 to be addressing the issues of Class I and Class II price 25 formulations which were settled for the time by Congress and

the legislation last fall. And I really object to further being required to address those proposals which have been put forward by Dr. Yonkers in his testimony. So I reiterate that objection.

5 JUDGE HUNT: You are asking to revisit my ruling 6 on your motion. It was allowed because the proposal as I 7 understand did allow testimony on the effects of Class I and 8 Class II pricing as a result of those proposals. And so for 9 that purpose, that is why the testimony was allowed.

10 MR. YALE: Okay. On behalf of the proponent to 11 proposal number 1 -- I am not going to name them all, but 12 select milk producers and others -- we join in that 13 objection. Our concern, Your Honor, is it is one thing that 14 they can talk about the impact. They could have done that 15 without having a proposal.

You can talk about the impact on these without a proposal. Our concern is whether this is set up in such a way that the Secretary actually can as a result of this rule-making hearing come up with a new price differential for Class I and Class II.

21 And Mr. Beshore is 1000 percent correct. The 22 statute does not permit that. And the Secretary has no 23 authority to change those differentials at this point. This 24 hearing was required by law. So if it is just to allow them 25 to talk about the impact, fine. I think that is very

1 relevant. But if it is to actually result in a change in 2 Class I differentials or Class II differentials in response 3 to anything in this hearing, then that is incorrect. JUDGE HUNT: Mr. Rosenbaum. 4 5 MR. ROSENBAUM: Your Honor, if I could be heard on б that question. I also want to clarify so we are clear about 7 this. These are proposals that were published in the 8 notice. These are proposals 3 and 4 that would affect Class 9 II, III -- I, II and III pricing, as well as Class IV 10 pricing with respect to any change in the calculation of the 11 butterfat price. 12 So there is no argument here whatsoever that 13 people did not have advanced notice that these issues would 14 be raised. They are explicit. They are the only things 15 covered by those proposals. 16 Now, as I understand the arguments of Mr. Yale and 17 Mr. Beshore, it is that because Congress required the 18 Secretary to hold hearings on Class III and IV which they 19 did, that the Secretary was somehow stripped of his power, 20 inherent power under the AMAA to hold hearings on any other issue. I know of no legal theory which would so state. 21 22 And so long sa the notice of hearing gave people 23 fair notice that these would be at issue, that is all anyone is legally entitled to. Now, obviously, this is a legal 24 25 debate with respect to testimony that has already come in.

1 So in a certain sense, this is not the forum to debate it. 2 But I think that there should be no question but 3 that everyone knew what this hearing was going to be about 4 and I would argue no question as to the Secretary's 5 authority to have included proposals 3 and 4 which he did. б JUDGE HUNT: Yes, Mr. Beshore. 7 MR. BESHORE: The only response I would make with 8 response to the text of the proposed hearing notice, Dr. 9 Yonkers has already corrected the text of certain other 10 proposals in the hearing notice. And I think the proposals 11 referred to by Mr. Rosenbaum can be corrected accordingly. 12 JUDGE HUNT: Mr. English. 13 MR. ENGLISH: Charles English again for Suiza 14 Foods Corporation and Master Dairies. Your Honor, this 15 hearing has been lawfully called. The Secretary published 16 the notice. I agree completely with Mr. Rosenbaum. 17 But what strikes especially about this is the denial of the interrelationship by those who would exclude 18 this testimony. The idea that you can actually look at one 19 20 piece of the equation without looking at the other pieces of the equation denies the economic reality of this system. 21 22 I urge you to overrule all the objections and 23 allow us to continue. There are going to be other witnesses on these issues and many of them have traveled expressly for 24 25 the purpose of testifying in favor of proposal number 3.

1 JUDGE HUNT: That is -- Mr. Cooper?

2	MR. COOPER: Yes. I just want to say from our
3	standpoint, we have noticed such matters as changes to the
4	butterfat which would affect all classes because there is
5	obviously an interrelationship. When you set butterfat
6	price for one product, you are going to change the price of
7	that product and it is going to affect the other products.
8	Now, on the other hand, we are not going to get
9	into the Class I differentials. And we are not going to get
10	into the Class II differentials. They were not noticed and
11	they are beyond the scope of what was noticed in this
12	hearing. That is all I am indicating.
13	JUDGE HUNT: Thank you, Mr. Cooper. Your
14	positions are in the record. So when the record is reviewed
15	by the Secretary's representatives, they will certainly read
16	your objections. And they will be in the position they
17	will decide, first of all, whether the testimony is beyond
18	the scope of the hearing today, whether it is relevant and
19	if it is relevant, what weight they will give to it. So
20	they are astute representatives. They are knowledgeable.
21	So I think they will give the proper weight to it. Mr.
22	Berde?
23	MR. BERDE: Your Honor, since the Secretary's
24	council has now acknowledged that Class I and Class II

25 differentials are not open, it seems to me that should end

the matter and nobody should be bothered about addressing
 those two issues in their briefing.

3 MR. ROSENBAUM: Well -- this is Mr. Rosenbaum. I 4 just want to clarify that -- I don't want to get into a 5 debate about precise terminology. But proposals 3 and 4 are 6 in the record and as being at issue. They are the questions 7 of how the butterfat price is calculated for purposes not 8 only of Class IV, but also Classes I, II and III. And those 9 issues clearly are open.

JUDGE HUNT: Are you going to -- is there still more on this point, Mr. Beshore? This is something you could argue the point -- you have argued the point today and presented your arguments very well. You can reiterate them in your briefs as to the pertinence of Mr. -- Dr. Yonkers' testimony and the weight that they should give to it. So you can address it again there.

17 All right. Mr. Beshore.

18 MR. BESHORE: Thank you, Your Honor.

19 BY MR. BESHORE:

Q Dr. Yonkers, I wonder if you have as an economist for your members have calculated the effect of your -- the various positions advocated in your testimony upon the price of milk in the Federal Order System?

A The only way to calculate the impact of any of these proposals on the price of milk in the Federal Order 1 System would be to use a very sophisticated econometric 2 model which we do not have available at IDFA. And we were 3 relying on the fact that USDA used that in the hearing 4 notice.

5 We support their use of a model which incorporates 6 supply and demand adjustments as a result of changes in 7 price relationships. We do not believe that we want to be 8 looking at just the change in the minimum milk price because 9 that is not the only price change that will occur in the 10 marketplace as economic agents respond to relative price 11 changes in the market.

12 Q Okay. Have you calculated, nevertheless, the 13 change in the minimum milk price that would occur if your 14 proposals were adopted?

15 A We did this for our members for their input in the 16 process we used to draft this testimony, yes.

17 Q So you have calculated that for your members'18 reference and information.

19 A Yes, I have.

20 Q Okay. Would you favor the hearing record with 21 those calculations?

22 A I actually didn't bring those with me, Mr.

23 Beshore.

Q Well, let's see if we can identify perhaps the -you know, the elements of that equation. Your -- would

1 maintaining the cheese make allowance at the present level 2 as you request would hold that value steady, would you agree 3 with that?

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4 A Yes, I would.
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5 Q Okay. Including 640-block cheese prices in the 6 survey for cheese prices for Class III would reduce the 7 Class III price. That would be your expectation, would it 8 not?

9 A I would not support that statement because of the 10 adjustment that is made to the price of those larger sizes 11 which we also recommend and --

12 Q Well, what did you calculate for your -- estimate 13 for your members would be the impact of adopting that 14 proposal?

15 A That happened to be one of the proposals we could 16 not do. There is no data on the price of 640-pound blocks 17 available at this time to my knowledge.

18 Q Okay. Reducing the adjustment for barrel cheese 19 in the NASS survey from three cents to one cent, did you 20 calculate how much -- what is the affect that would have on 21 the Class III price?

A That would lower the Class III price minus any other adjustments in the price adjustor due to moisture. As I pointed out in my testimony, there is two components to that current price adjustor we are recommending. And our

1 testimony focused on only one of those two components which 2 was the component related to the difference in the actual 3 cost of manufacturing. And I am trying to break these out one at a time. 4 Q 5 The three cents minus one -- going to one cent from three cents, what effect would that have? 6 7 А It would have the effect of lowering the Class III price. 8 9 By how much? 0 10 А I don't recall and I don't have that with me. Okay. Now, reducing the butterfat price in Class 11 Q 12 III by six cents per pound as you proposed, what effect 13 would that have on the Class III price? 14 А That would have very little change on the Class 15 III price because of the way the formula works. Lower butterfat price will actually be reflected in a higher 16 17 protein price. 18 Okay. You are sure that would have little effect 0 on the Class III price. 19 20 А Yes. Okay. Lowering the butterfat price in Class II by 21 0 22 six cents a pound, what effect would that have on the Class 23 II price? 24 А That would lower the minimum Class II price. 25 0 By how much?

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A I don't have those numbers with me.

- 2 Q Okay.
- 3 A And I don't recall.

4 Q Reducing the Class I butterfat price by six cents 5 per pound, what effect would that on the Class I price in 6 all Federal Orders?

7 A That would have the effect of lowering the minimum8 Class I price in all orders.

9 Q Okay. By how much?

10 A I do not recall that number.

11 Q Reducing the Class II differential as you have 12 proposed, what effect would that have on the Class II price? 13 It would have the effect of -- we are only А 14 proposing that for any change made in the Class IV product 15 price formula that lowers that. So we are not proposing 16 that as a change unless the Class IV product price formula 17 is lowered for skim milk.

18 Q You mean if the Class IV price goes up, you want 19 the Class II price to go down.

20 A That is correct. The Class II skim -- the Class 21 IV skim milk price is increased. We do not want the Class 22 II skim milk price to increase accordingly because, as I 23 stated in my testimony, the relationship that is established 24 between nonfat dry milk and Class II skim, if you didn't 25 reduce that differential, would increase and it would

1 increase the opportunity and the economic viability of 2 substituting nonfat dry milk for Class II skim solids. 3 Q And you have calculated -- I assume that there 4 would in fact be an economic incentive that would make it 5 likely that those substitutions would occur? б А Of course, that depends on the relative prices in 7 the marketplace, what happens to nonfat dry milk. At the 8 current time with nonfat dry milk sitting at the support 9 price and the government purchasing nonfat dry milk every 10 week, no, there is no change in the nonfat skim price. But 11 we are not implying that that is always going to be the 12 situation. 13 Well, have you calculated what price relationships 0 14 there would need to be in the marketplace for the 15 substitutions for which you are concerned would take place? 16 А Yes, we have looked at that and I do not have 17 those numbers with me. 18 Okay. So you really are not ready to tell us what 0 19 price relationships would have to be out there for that to 20 occur. But you have advocated changing the differential because you say it will occur. 21 22 А Well, we will also have members testifying later 23 in this hearing who actually process Class II products who will testify to that. 24

25 Q Okay. You would agree, of course, that the -- for

1 a substitution to take place, you would have to have enough 2 of a price differential to cover the costs of -- by the way, 3 the substitution that you are really concerned about here is 4 butterfat from Class IV to Class II, is it not? 5 Α We are -- the one you specifically just asked б about related to the nonfat dry milk, also. You related to 7 the --Okay. Which are you more concerned about, the 8 0 9 nonfat solids or butterfat? 10 А We are concerned about both because anytime you 11 increase the economic incentive to use substitute Class IV 12 products for Class II milk inputs, you are not going to be 13 fully reflecting the value of that Class I use back to milk 14 producers. 15 0 Okay. Which ingredient substitution is more 16 likely considering the price relationships in the 17 marketplace now or which you foresee, butterfat or nonfat 18 solids? 19 А We believe it would be more likely to have 20 butterfat substitution than for --Okay. And for butterfat -- and I understood your 21 0 22 direct testimony to be addressing butterfat substitution. 23 For that to occur, you would need to have a price 24 differential there that accounted for the cost of converting 25 that Class IV butterfat into butter and then converting the

1 butter back into the Class II products, isn't that correct? 2 А That is correct. 3 Q Okay. And have you calculated what price scenarios in the marketplace would be required to make that 4 5 conversion economics and, therefore, likely? б А It is not only -- let me also state it is not only 7 butter. It is also the same conversion factors for 8 anhydrous milk fat or butter oil or plastic cream. The same 9 conversion could take place. 10 0 Do your members use those in ice cream? 11 А We will have members to testify later to what 12 products they use. 13 Do you know if they do? 0 14 А During our preparations for this hearing, they 15 indicated that they look at that possibility. They did not 16 indicate that they do it on a regular basis. But they said 17 it is one of the factors that they look at in sourcing 18 ingredients for their manufacturing operations. Do you know if they have ever included those 19 0 20 products in their ice cream? I will let them testify to that effect. 21 А You don't know, is that correct? 22 0 23 А I don't recall. 24 Okay. Do you know, are you ready to testify what Q 25 butterfat -- what butter price would be required in order

1 for the substitution to be economic use of product?

2	A As I outlined in my testimony, the price would
3	have to increase by the cost of manufacturing butter which
4	currently is the make allowance of 11.4 cents. In addition,
5	it would have to increase by the cost of storage of butter
6	over the period of which you are doing it and then the cost
7	of turning that butter into the appropriate use for your
8	manufacturing process. And once again, we will have members
9	testify as to how they look at that economic relationship.
10	Q Okay. But you are satisfied to testify that
11	likely price relationships will make that economic and
12	likely to occur.
13	A Yes.
14	Q Okay. Let me you have advocated, Dr. Yonkers,
15	that the as I understand your testimony, that the
16	Secretary not consider the information presented by Dr. Ling
17	in the Rural Business Cooperative Service survey, but
18	consider the information presented in the survey which your
19	testimony refers to, initiated by your employers. Is that
20	your position?
21	A Yes, that is.
22	Q Okay. Have you how many times has that survey

23 been taken by your organizations? This is the only time, is 24 it not?

25 A To my knowledge, this is the first time we have

1 undertaken this type of survey, that is correct.

2 Okay. And you have not personally reviewed any of 0 3 the information, the primary information coming in from your 4 members with respect to that survey, is that correct? 5 Α That is correct. Have you -- do you know who has personally 6 Q 7 reviewed that information? 8 Yes. We contracted with an outside statistical А 9 and accounting research firm -- survey and accounting 10 research firm to look at that data as it came in. And as I 11 indicated in my testimony, anytime they found any individual 12 cost data item which was more than ten percent outside the 13 range of data that was reported in the 1996 Rural Business 14 Cooperative Service report, they called back the plant contact and attempted to confirm that that was in fact and 15 16 the reasons for that number being outside the range that 17 they were looking at. 18 The organization with which you contracted, have 0 19 they ever previously done any cheese manufacturing cost 20 studies? No, they had not. 21 А 22 Q Okay. Do you know how many persons there are on 23 their -- how many persons are on the staff there that were 24 involved in this work? 25 А I know at least two that were involved in this

1 work on the staff.

2 Are any of those persons statisticians? 0 3 А They are both economists who have had statistical 4 training. 5 0 Are any of them agricultural economists? б А No. 7 Have they previously done any studies for USDA Q 8 hearings to your knowledge? 9 No, not to my knowledge. А 10 0 Okay. Have they ever been in a cheese plant? 11 А Not to my knowledge. 12 Do you know -- strike that. When was the 0 13 communication sent to your company or to the plants which 14 you surveyed asking for the information? 15 А In early March of this year. 16 As I understood your testimony, it was sent --0 17 well, maybe you can clarify it. To what plants was the 18 correspondence sent? We used USDA's Grade A plant inspection list for 19 А 20 those plants that were coded as manufacturing cheddar cheese primarily for our survey. And that resulted in about 90 21 22 plants that we sent the survey data to. In addition, we 23 included about another dozen -- ten to 12 plants that 24 processed whey in California. And that was only for the 25 whey data.

1 We did not collect cheese data from California 2 plants because our intention was to rely on the California 3 Department of Food and Agriculture data for that. And in 4 addition to those -- included in that ten to 12 whey plants 5 were some plants which did not produce cheddar cheese but б did product dry whey. They were only surveyed for their dry 7 whey costs. Did you send the information -- the 90 plants, is 8 0 9 that the total listing of cheddar cheese plants on the 10 survey? 11 А As we went through that, that -- in the inspection 12 -- I'm sorry. Ask your question again. 13 The plants to whom you sent the surveys, was that 0 14 every plant listed on the inspection list that you worked 15 from? 16 Every plant -- the inspection list does not list Α 17 addresses. And for every plant on there, we were able to 18 find an address for, yes, they were included. 19 Do you know how many you sent it out to? Q 20 А I believe it was about for cheddar cheese, 78, and then the additional ten to 12. I don't recall the exact 21 22 number for whey plants. 23 Okay. Now, your results are based on -- for 0 cheese are based on 15 plants operated by ten firms. Dr. 24 25 Ling identified for the hearing record the firms and plants
involved in his survey. Are you prepared to do the same 1 thing? А I do not have that data available now. But, yes, we are prepared to list the firms that were involved that 4

5 supplied the data on the plants.

2

3

б Q Are you going to do that for the hearing record? 7 А Yes.

Okay. When do you expect that to be available? 8 0

9 А Perhaps later today.

10 0 Okay. While you are still open to examination I take it. 11

12 А I don't believe so, but --

13 MR. ROSENBAUM: That's fine.

14 BY MR. BESHORE:

15 Q But it is your intention to perhaps make that information available, but not be available to be asked 16 17 about it.

18 MR. ROSENBAUM: No, no, Marvin. If you want to ask him questions about the list, it is fine with us. 19

20 MR. BESHORE: Very good.

BY MR. BESHORE: 21

The list of plants in the whey survey will also be 22 Q 23 provided for the record?

24 А The list of firms, yes.

25 0 The list of firms. How many of those plants of

1 the firms involved were not NCI members?

2	А	I am not sure.
3	Q	Do you know if any of them were not NCI members?
4	A	I am not sure, Marvin.
5	Q	Okay.
б	А	I will have to look at it.
7	Q	What was there correspondence sent in addition
8	to that t	hat has been provided in, you know, Exhibit 14 with
9	the surve	ys?
10	А	There was a cover letter asking for their support
11	in collec	ting the data for this survey and indicating that
12	we were p	lanning on using that data in preparation for this
13	hearing.	
14	Q	Would you be prepared to provide that cover
15	correspon	dence for the hearing record?
16	A	Yes.
17	Q	Going to the was there anything else that went
18	out to th	e survey parties besides the cover letter and the
19	exhibits	which were which are attached to Exhibit 14?
20	А	No.
21	0	What let me just ask you. I note that one of
22	~ the point	s that you have made in contrasting your survey
23	with Dr.	Ling's is that you included overhead costs
2.4		Administrative overhead, ves
25	∩ ∩	administrative overhead costs What
20	Q	administrative overmedd Costs. Wildt

1 instructions did you provide to the survey participants with 2 respect to how to allocate those costs?

A The general survey instructions which are in the appendix that I provided state that wherever possible, costs should be allocated directly to each product. Costs which cannot be allocated directly should be allocated on the basis of the total milk solids in each product.

8 Q Okay. Well, one of the problems with overhead 9 costs that Dr. Ling identified as a reason for not including 10 them in his regular survey of plant operations was that it 11 is difficult to know -- to be consistent and to know how to 12 allocate overhead to the products. And I am just wondering 13 how we are to understand that the respondents to this survey 14 allocated their overhead to the products.

15 A Based on their understanding of the survey16 instructions.

17 Q And the survey instructions say wherever possible,18 costs should be allocated directly to each product.

19 A That is correct.

20 Q That is the only instruction, correct?

A And were not allocated on the basis of the total skim milk products or the total skim milk solids in each product produced in the plant.

24 Q How would -- what do you mean by allocating 25 directly to each product? How would a firm reporting --

1 let's assume Kraft was one of the reporting firms. I don't 2 know. But if they were, how would they allocate according 3 to your instructions the overhead of Kraft's corporate 4 structure to their cheese plants at a -- to their cheese 5 production at a given plant location? б А I am going to defer to our members who will be 7 testifying later who participate in the survey about how 8 they did that and let them testify to that. 9 Do you know whether they all did it the same way? Q 10 А There was no way to know if they all do it the 11 same way the same as there is no way to know for all costs 12 how they are allocating it in a consistent manner unless you 13 audit the plant survey. 14 0 Well, there are any number of ways that overhead 15 could be allocated to the production of dairy products at a 16 plant, are there not? 17 А We asked them to do it directly to each product where possible and on the basis of the total solids in each 18 19 product if they were unable to allocate it directly. 20 Q Okay. When you say -- but the overhead that they are allocating may be attributable to any number of 21 22 different business enterprises within that company. Is that 23 not correct? Well, then we did not -- we allocated -- asked 24 А

25 them to allocate it to the products, not to other functions

1 in the company.

2	Q What okay. I am not asking how you asked them
3	to allocate it. I am trying to understand what they were
4	allocating. Let's assume that Kraft has a billion dollars
5	of overhead beyond the plant levels in Kraft U.S.A. How is
6	that to be allocated to the production of ten million pounds
7	of cheese at a given plant location?
8	A If the entire overhead cost was associated with
9	the production of that cheese at that plant, it would all be
10	allocated to that plant. And if they produced another
11	product there, it would be based on the products that they
12	produced there directly if possible, dry, wet or otherwise.
13	Q Well, are you saying this was limited to plant
14	overhead?
15	A It specifically we asked for costs associated
16	with the plant, that is correct.
17	Q Okay. And where in the instructions do I find
18	that direction?
19	A "Cost data is to include all in-plant costs of
20	moving farm milk from the receiving deck to the producer
21	delivery" " to the product delivery deck."
22	Q And that is the instruction which allowed them to
23	generate the numbers related to general and administrative
24	overhead in your survey?
25	A That were related to the plant costs, yes.

1 Okay. Did you review since you are the witness 0 2 presenting this information -- did you review the general 3 and administrative costs since that is the only -- that is 4 the only line item that is not included in Dr. Ling's survey 5 that is included in yours. Isn't that correct? б А That's the only individual line item. I would 7 include that Dr. Ling in addition explicitly excludes any 8 procurement costs that may be associated either in overhead 9 or in direct plant labor and, in addition, excluded 10 marketing costs which are included in our survey. 11 0 Well, you didn't end up surveying the marketing 12 costs. You just used California numbers, isn't that 13 correct? 14 А That is not correct. We used our numbers. 15 California doesn't have numbers on marketing costs either. 16 Okay. So that is why on your table you have got 0 17 the same number for both. 18 That is correct. We used our number. Α 19 With respect to the general and administrative 0 20 costs, did you review these for reasonableness, Dr. Yonkers? I compared them to what had been reported from the 21 А 22 California Department of Food and Agriculture, yes. 23 0 And how did they compare? I believe they compared within the range of data 24 А

25 that was reported for California.

1

Q Within the range of data?

2 А Yes. 3 0 Your numbers are about, what, 60 percent higher 4 for general and administrative for cheese than the 5 California numbers? That's probably -- the arithmetic is б not quite right. About six or seven cents higher per 7 hundred-weight? I would agree with that statement, yes. 8 А Okay. About, what, 40 percent higher? 9 0 10 А No. I would say that is more like 30 percent 11 higher. 12 0 Can you -- do you have any reason to -- did you 13 exclude California plants or did you include California 14 plants? We have no California plants in our cheese cost 15 А 16 survey. 17 Q Do you know where the plants are located 18 regionally? A I don't have that data at this time. 19 20 Q Okay. Now, you are going to provide the firm --That is correct. 21 А 22 0 -- names. But are you going to provide us the 23 plant locations as Dr. Ling did? 24 A He didn't -- to my recollection, he didn't provide 25 specific plant locations.

1 Q Well, if your -- yes, if your Farmers Cooperative 2 Creamery in Minnville, Oregon -- it is pretty clear where 3 the plant is, isn't it? A I guess I am not -- I don't understand what you 4 5 are asking. Would you like a regional breakout of where the б plants were located? 7 As Dr. Ling provided, can you provide that? Q I believe so. 8 А 9 Okay. Is there any -- do you know why the general Q 10 and administrative costs of your firms would be, you know, 11 30, 35, 40 percent higher than California plants? 12 А No, I do not. 13 With respect to general and administrative costs 0 14 on your whey survey, 3.37 cents per pound of whey, are these 15 stand-alone whey plants? 16 А No, they are not. 17 Q Are they -- are the whey plants -- do they make other products at these plants? 18 Yes, they do. 19 А 20 0 Are any of these plants in California? Yes, they are. 21 А 22 Q Now, if you took the general and administrative 23 out of your whey product costs, you've got about -- we are 24 right where we are right now on whey make allowance, isn't 25 that correct?

1 А You are actually -- where we are now is 13.7 cents 2 whey make allowance. If you took out the general 3 administrative costs which I believe is what you just asked --4 5 0 Yes. б А -- that would put us down at, what, 12.5 something 7 cost. 8 0 Okay. 9 So it would be considerably less. А 10 Q Okay. Is there any reason why your whey 11 operations were so much more top heavy than the cheese 12 plants? 13 I'm not sure I understand the question. А 14 Q Well, it costs -- you know, you need plant 15 overhead of 3.37 cents per pound of whey versus, you know, 16 1.9 cents in the California survey for cheese. Apparently, 17 you need a lot more plant overhead to make whey than you do 18 to make cheese. Isn't that what your survey showed? And we will have members testifying specifically 19 А 20 to operations of whey plants versus cheese plants -- or the whey operations versus cheese operations later. 21 22 0 As an economist testifying on behalf of the study 23 and indicating its reliability and superiority to that of 24 Dr. Ling's, can you give us any reason why it would cost so 25 much more in plant overhead to make whey than it does

1 cheese?

2 Once again, I will defer to our members to talk А 3 about specific operations. I have been told that there is, 4 as you can see here, much less direct labor costs associated 5 with whey, that those plants are more highly automated which requires more plant administration. б 7 So you've got less labor to supervise --0 Less -- more labor to administrate the plant and 8 А 9 less direct labor in the whey operations relative to cheese-10 making. 11 0 Okay. Let's -- did your correspondence with your 12 members -- I think I understood this, but just to be clear -13 - specifically tell them that the survey would be used for 14 this hearing? We specifically indicated -- and once again, 15 А 16 Marvin, I didn't bring the letter and I haven't read it 17 lately. I will make the cover letter available. I believe 18 it indicated that we were collecting this for use in input in our testimony for the hearing. I don't believe we 19 20 directly said we were going to use this number as our proposal anywhere. And that didn't go to our members. It 21 22 went to everyone on the plant list. 23 Q The person -- so the persons who were providing the list are all plant operators. And they knew -- they had 24 25 never been surveyed before NCI for the plant costs --

1 A That's correct.

2	Q for any independent business purpose. And they
3	knew that the information was going to be collected and used
4	solely for the purpose of determining the make allowance
5	which goes into their raw milk cost in Federal Order
6	hearings. Is that correct?
7	A It was not solely we did not indicate we would
8	solely be using it for that purpose. We also indicated that
9	with sufficient response, we hoped to make it available as a
10	benchmarking study, also.
11	Q In other words, it might have the secondary
12	purpose of serving the same purposes that Dr. Ling's survey
13	has served for 16 years.
14	A That is correct, for those who participated.
15	Q Okay. Now, let me ask you just a couple more
16	questions, Dr. Yonkers, about your policy arguments with
17	respect to make allowance. You have argued that it is a
18	great evil to have the make allowance too low.
19	A That is correct.
20	Q Okay. Is there ever any danger that the make
21	allowance could be too high?
22	A In my testimony, I clearly indicated that if it is
23	too high, the market corrects for that. And it is very
24	consistent with the minimum milk pricing that has been done
25	for a long time by Federal Milk Marketing Orders.

1 And the primary reason for that is given the large 2 percentage of manufacturing done by cooperative 3 associations, we and USDA in the hearing notice presume that 4 that money is in excess of actual plant costs that might be 5 in -- accruing to the plant from setting too high a make allowance, will be returned to the members. б 7 And proprietary plants will have to compete with that for milk supply in the marketplace. If money is being 8 9 returned there, they have to compete with that. Otherwise, 10 there is an incentive for shippers to change and go to those 11 plants that are paying all that money out. 12 Okay. Now, your -- if I understand your position Q 13 correctly, since you are advocating basically keeping the 14 make allowance at the level it is now, you would -- that 15 level is a level that is sufficiently high to self-correct 16 in the marketplace as you have described. Am I correct in 17 that? 18 We are advocating not necessarily that it be Α 19 exactly where it is, although we would support leaving it 20 there. We are advocating having USDA use all available data for setting the make allowance and that it is not merely a 21

23 of setting it too low.

22

Q Well, I am just -- but you would support the present level and you think that meets your policy

mathematical derivation because of the policy implications

1 stipulations.

2 А Yes. 3 0 Okay. Can you -- I take it that the marketplace 4 should be operating the way you have postulated if that 5 meets your policy parameters. Am I correct? I have no knowledge that the marketplace is not б А 7 operating in a competitive manner. 8 0 Well, do you know anything about the price that 9 plants -- that cheese plants are paying in, for instance, 10 Idaho for cheese? 11 А I don't know that anyone has that knowledge. 12 There is no secondary published data on what those plants 13 are exactly paying. 14 Q And you didn't investigate that. 15 А No, we didn't ask that in the survey. 16 Okay. So if there are areas of the country where Q 17 in the present parameters, you know, plants are purchasing 18 milk, large quantities of milk, manufacturers of cheese, at 19 the minimum Federal Order price, would it then -- what does 20 that tell us about the present make allowances, if anything? Could you repeat your question. I am not sure I 21 А 22 follow what you are asking. 23 Well, let me go at it this way. Are you familiar Q 24 with the prices paid in the area of Minnesota and Wisconsin 25 in the upper midwest for milk to manufacture cheese at the

1 present time?

2	A There is no data by what type of plant pays for
3	cheese. I know what manufacturing plants in general, both
4	cheese and butter powder plants, are paying because of the
5	Grade B survey in Minnesota and Wisconsin, the manufacturing
б	grade milk price that is reported.
7	Q Well, how about the mailbox milk prices?
8	A That is by all plants. That's not just cheese
9	plants.
10	Q Now, if you have got do you know approximately
11	the percentage of cheese of milk in the state of
12	Wisconsin that is used to manufacture cheese?
13	A I don't believe there is any statistics on a state
14	level basis. There is on an order level basis for that
15	order which would indicate it is a little over 80 percent of
16	the milk is used in manufacturing milk products. I have not
17	looked specifically at the utilization in Class III, keeping
18	in mind Class III has other products besides cheese.
19	Q Well, let me just ask this, Dr. Yonkers. Are you
20	not aware that cheese plants in Minnesota and Wisconsin
21	regularly pay very substantial premiums over the present
22	minimum Federal Order price for their milk for Class III?
23	A I knew they were doing that prior to January 1. I
24	haven't really and will have members who operate plants
25	that may want to testify to that. But, no, I don't have any

1 direct knowledge of what they are doing at this time since 2 the pricing change went into effect January 1. 3 Q Okay. So if I understand your testimony then, 4 your policy parameters that you have argued for, you really 5 haven't subjected them to any scrutiny with respect to how б the marketplace is presently operating in the Federal Order 7 system in terms of your theory that premiums will 8 automatically be paid if the make allowance is at a very 9 generous level. 10 Α I will go back to the logic I outlined in my 11 testimony in that that money for those plants that are 12 cooperatively owned, operated -- owned and operated by 13 cooperative associations, that money if it is in excess of 14 the make allowance, if the make allowance is too high, if 15 there is any excess money above the actual cost of 16 manufacturing, will be returned to its members. 17 And in order to maintain a competitive 18 relationship and have a milk supply -- you know, I was a 19 statewide extension specialist in Pennsylvania for nine 20 years. And farmers were always wondering what their neighbor was getting. And they were always comparing milk 21 22 checks and trying to figure out why one was getting more 23 than the other. And they were always looking at the 24 opportunities to sell their milk to the highest payer.

So I think competition in the marketplace has

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1 always existed. I see no change in implementing the final 2 rule that has changed that competitive marketplace. 3 0 Well, the market structure of each individual area 4 can play into that equation, can it not? 5 Α Well, I don't know of any proposal that looks at б regionally changing these product price formulas. And we 7 would certainly oppose that. It is only another reason why 8 we should be looking at minimum pricing in allowing the 9 market to work. Otherwise, you are going to be fixing in 10 place the current market structure between production and 11 processing if you try to capture everything in each 12 individual market situation.

You don't allow for the fact that there is shifts in costs associated with operating in one place or another and there are shifts in demand in the need for the products you are producing that may change geographically over time and may change where you choose to locate.

18 Q Do you have any reason to believe that the member 19 owners of dairy cooperative plants are willing to invest 20 their capital in manufacturing plants and receive a lower 21 return than the private investors who operate proprietary 22 cheese plants?

23 A I have no evidence of that.

Q All right. As far as your understanding -A Not their investment in cooperative associations.

1 Q Okay. So would it be your expectation as an 2 economist that they would require the same return? 3 А I would expect that as rational economic agents, 4 they would look at the returns available in the marketplace 5 and make those decisions accordingly. 6 MR. BESHORE: Okay. Thank you, Dr. Yonkers. 7 JUDGE HUNT: Next person? Mr. Yale? BY MR. YALE: 8 9 Good morning. Q 10 А Good morning. 11 Q As I read your testimony and heard you read it, I 12 got the impression that what you want to do is to do this 13 right. Is this correct? You want the formula to be done 14 right. 15 А Our members believe that once you have -- we have 16 made the change to product price formulas, that it is very 17 important that all components of those product price 18 formulas be as accurate as possible, that is correct. 19 0 And as I also read your testimony, I came to the 20 understanding that you believe that when we have the M&W and then the BMP where we were looking at this competitive price 21 22 for manufactured grade milk, that that yielded the right 23 result in the marketplace. Is that correct? 24 We supported the fact that it was based on a А 25 competitive price in the marketplace. We did not support

the fact that that competitive price was geographically limited to a two-state region in the upper midwest and, therefore, did not reflect national supply and demand conditions.

5 Q During that period of time when we were using the 6 M&W and the BMP, was that providing a sufficient amount of 7 difference between the market price for cheese, for example, 8 and the minimum Class III price that your members' clients 9 could be economically successful and viable?

10 A Once again, the only criticism was its limited 11 geographic region, that it was not reflecting national 12 supply and demand conditions. It was limited to the upper 13 midwest. And with that caveat, they believed that that over 14 time -- that had to be reflective or you would see 15 structural adjustment.

16 You would see plants, as I mentioned -- if it was 17 not providing enough funds to cover their total cost of 18 operation, they would shift operations from region to 19 another which has occurred quite a bit in the last 20 years 20 and -- or in addition go out of business.

21 And we have seen some plants close and some 22 consolidation over the years that would indicate that 23 perhaps that condition in all areas, the relationship 24 between the cheese price and the minimum milk price in all 25 areas of the country was not providing an adequate level to

1 maintain productive capacity.

2	Q And where were these shifts occurring?
3	A Primarily, as I indicated, to California. The
4	share as I indicated in my testimony the share of cheese
5	production, U.S. share has nearly tripled out in California
6	due to the fact that their cheese production in the last 20
7	years has gone up over 700 percent. During that period, I
8	would note that California had a product price formula. And
9	during that entire period, the Federal Order System was
10	based on those competitive prices, first the MW and later
11	the BFP that you mentioned.
12	Q What are the fastest growing states now in milk
13	production?
14	A Milk production?
15	Q Yes.
16	A In terms of actual pounds of milk, I believe
17	California is still leading the way. In terms of increases
18	on a percentage basis
19	Q Yes.
20	A Idaho and New Mexico seem to be the largest
21	states in terms of milk production and growth.
22	Q Are they subject to the California pricing system?
23	A No, they are not.
24	Q Also, as I went through your testimony, I got the
25	understanding that you were opposed to different butterfat

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price for Class III and Class IV. Is that correct?

A That is correct.

3 Q And that your argument of -- isn't so much reduced 4 to butterfat price. It is if you do it, you do it on all 5 four classes.

A That's correct. We believe that those -- all four -- well, particularly Class II, III and IV compete in the same market, in the same month for supply of milk fat for their products. They are out there and competing in the market. And we believe that any change that is implemented should not drastically change the minimum price they have to pay for that milk fat among classes of competing use.

Q I want to take another topic here. I want to talk about your request for the 640-pound barrels -- or blocks. Is it still -- or is it IDFA's position -- I don't want to use the word, "still" -- that these cheese prices such as the barrels and the like should be adjusted for moisture in this pricing formula?

A There were no proposals to adjust -- well, let me take that back. The only proposals were to adjust blocks up to 39 percent. And we did not take a position on that. We are aware that there may be some testimony later in the hearing that refers to putting both cheeses in 500-pound barrels or 640-pound blocks on a consistent moisture basis. We don't have a price reported for 40-pound blocks.

1 And we felt that it was very important to get into 2 the record the fact that the current three-cent adjustor 3 that is used to the NASS price survey for the 39 percent 4 moisture adjusted 500-pound barrel price reflected two 5 components. One is a difference in moisture content and the б other is the actual difference in the cost of manufacturing 7 500-pound barrels versus 40-pound blocks. 8 0 Is that what it says in the final rule, the 9 decision, that that is what the three cents is for? 10 А I don't believe so, no. 11 Q Now, going back on this thing with the 640-pound 12 blocks, I guess back to my point is the idea of adjusting 13 all to the same moisture, you have no position? 14 А Our members did not come to a position. 15 Q Do you see that as a rational thing, as to adjust 16 them all to the same moisture level? 17 А We discussed it and we didn't see any reason either to oppose or support that. So, yes. We see no --18 Q But if -- just taking the point -- are you 19 20 familiar with 640-blocks of cheese, their characteristics? I have never had one in my refrigerator. I am 21 А 22 aware that they are made out there in the marketplace. 23 0 Right. Are you aware of the lack of consistency and moisture within the block itself? 24 I am aware that it is variable both for -- that 25 А

that is a factor of all. I don't know the relative 1 2 variation. And we will have other members that will testify 3 to specifics of different package sizes for cheese. 4 0 And are you also aware that 640-pound barrels were 5 sold primarily on special order? б А No, I am not aware of that. I have no knowledge 7 of that. Now, you indicated just in your cross examination 8 0 9 here with Mr. Beshore that you did not look at the 10 competitive situation for supply of milk with plants in the 11 upper midwest, at least since 2000, the beginning of this 12 year, in comparison to the prices. Is that a fair 13 statement? 14 А That is a fair statement. 15 Q All right. And -- but you also testified that as an extension with the Penn State --16 17 А My prior life. 18 -- you prior life, that you were very familiar Q 19 with Pennsylvania farmers. 20 А That is correct. All right. Have you done any analysis of the 21 0 22 relationship or the situation in the west with producers --23 А Which specific relationship are you asking? 24 Let's talking about -- I am talking about between Q 25 producers and plants and the pricing and the competition for

1 milk.

2 А Not specifically. And particularly, I am not an 3 expert on California's milk pricing system. What about New Mexico or Idaho? 4 Q 5 А I have no specific knowledge of producers in those б areas. 7 You indicates as I think a theme that kind of Q reoccurs over and over again if you set the price with a 8 9 make allowance that is high which results in a lower 10 producer price, that the market will respond to make up the 11 extra to the producers that the market can, in fact, pay. 12 Is that right? 13 А That is correct. 14 Q All right. 15 А There is a competitive market out there. And as I 16 pointed out, given the high number of -- the higher 17 percentage of these products that are manufactured by 18 cooperatives, they will return that either in the minimum 19 price or when they distribute their operating income at the 20 end of the year. 21 What about in markets where it is predominantly Q 22 proprietary plants? 23 А Well, we are operating in a national market. If 24 there is predominantly proprietary plants there and using 25 your example, if they were not passing that along as an

1 over-order premium, I would expect over time there would be 2 less milk production there relative to regions where they 3 were capturing that premium. 4 How much time? How much time? Q 5 Α We are seeing increasingly that markets adjust б much faster than they used to in terms of milk production. 7 It appears that farmers respond to relative price 8 differences more quickly than they used to. 9 All right. Are you aware of the fact that in --Q 10 well, in fact, in various portions around the country, but 11 particularly in the west, that there are cheese plants with 12 long-term contracts at Federal Order minimum prices; that 13 purchase milk for a long-term contract at Federal Order 14 minimum prices? 15 А I am not aware of contractual arrangements, no, I 16 am not. 17 All right. Now, but take that -- and not saying Q that you accept that, but use that as an assumption in this 18 19 situation. If today we just across the board dropped the 20 Federal Order minimum price 20 cents a hundred-weight in those markets by raising, you know, the make allowance, how 21 22 will competition in the marketplace give that 20 cents back 23 to those producers? If the -- what is being returned to them is not 24 Α

24 A II the -- what is being returned to them is not
 25 sufficient for them to stay in business, I don't know how

you can enforce that contract. So that is -- the marketplace is not -- is sometimes cruel. But there will be market adjustments. It will decrease the milk supply. And those plants will have to pay more in order to obtain the same milk supply.

б You can't just drop the price. Well, let me go back and say that you can't drop the price to farmers 7 without expecting a supply response. I know of no economic 8 9 study for any commodity, and specifically none for milk --10 raw milk that suggests you can lower the price that they are 11 being paid and not have an aggregate supply response; that 12 there will be less milk available. If the plants want the 13 same quantity of milk available, they will have to pay more. 14 And if that has to come through that minimum price -- that 15 over-order premium, above that, that is how they will do 16 that.

17 Q

Will that happen the next month?

18 A There is nothing to indicate that those supply 19 adjustments occur on a month-to-month basis. But I would 20 expect that to occur in a year or two.

21 Q And that process of reducing that supply means 22 that some producers are going to have to go out of business 23 in response to that drop in price. Is that correct? 24 A Well, that occurs whether that drop in price comes

25 from a minimum regulated price or due to factors in the

1 market. That is our accepted system that we have in place. 2 But you are proposing to induce a lower price Q 3 rather than have the market bring a lower price. 4 I am not inducing a lower price because I firmly А 5 believe that market competition will return any money that б is available above actual manufacturing costs should USDA 7 set too high a manufacturing allowance; that it will be 8 returned to the marketplace provided that milk is needed. 9 Now, that is a key -- that is really a key point because if 10 the milk isn't needed, then -- because there is not the 11 demand for the products by all consumers in the marketplace, 12 then that is a different matter than what we are talking 13 about here. 14 0 Except in the situation where I mentioned where 15 the price is the minimum price is the contract price and 16 there is long-term legal situations that would bring that 17 on. 18 А I am not aware of that. You would agree, however, that in addition to --19 Q 20 you talk about in terms of a free market of goods and services, moving, you know, in response to dollars and 21 22 demand. But the --23 А You are talking about a competitive market. With a competitive market. But in addition to the 24 Q 25 regulation that we are talking about here today, there are

1 other constraints on that free market that exists, are there
2 not?

3 A Constraints in terms of what is being paid from4 plants to producers?

5 Q Yes.

б А I don't know of any regulation that prohibits them 7 from paying anything. I do know that there are cooperative 8 laws that require them to distribute their proceeds or a 9 fair portion of -- a certain portion of their proceeds have 10 to be distributed to their members. And that is one of the 11 reasons why USDA in its hearing notice and why I in my 12 testimony pointed out that those moneys will be available to 13 cooperative associations. But I don't know of anything that 14 prohibits moneys from being paid in the marketplace. That wasn't my question. My question was whether 15 Q

16 there are other constraints in addition to federal 17 regulations that interfere with the market, the competitive 18 market.

19 A That interfere with supply and demand or just 20 the --

21 Q Your theory under this competitive market.

A Well, I guess I will -- I am not sure what you are getting at. But I will concede that there are laws which do influence how people act in a marketplace.

25 Q You just made the comment that you repeated again,

1 over and over again in this idea that if the co-ops get it, 2 they pass it on to their members. How many producers are 3 members of cooperatives? How many of them sell milk to 4 proprietary plants? 5 Α Well, I don't know how many sell milk to proprietary plants. Are you talking about cooperatives that б 7 sell milk? 8 0 Producers. 9 А Producers --10 0 Producers individually that --11 А -- individually that sell to proprietary plants. 12 Sometimes called independent producers. 0 13 Yes, I don't know that that number is published А 14 anywhere. I --15 Q And how many members of cooperatives are members 16 of cooperatives that have manufacturing plants? 17 А Yes. I believe Dr. Ling does statistics on operations of processing cooperatives. I don't believe that 18 19 there is a publication available on operations of bargaining 20 cooperatives. But you would agree, would you not, that if you 21 0 22 have bargaining cooperative, they are not going to have any 23 of the money come back to them from the plant proceeds; that 24 extra money so to speak that you say that would be there 25 from an extra higher --

1 А Well, go back to the competition in the market. 2 If they are receiving less, it is less likely that their 3 members will stay with that cooperative and not go to the 4 one that is actually paying it. 5 Q I want to take you to another issue. You -- in б your study, you indicated there were 15 cheddar plants that 7 reported to this NCI cost study? 8 А That's correct. 9 Can -- I know you say you are going to give us the 0 10 list. Can you tell us who the firms are, how many firms 11 there are? You said it was 15 plants. But how many firms? 12 A I believe I said in my testimony that there were 13 ten firms. Let me check it -- ten different firms and I am 14 going to make the firm names available, not the plants 15 available. Okay. And ten firms. And that included all 15 16 0 17 cheese plants. 18 А Yes. 19 0 All right. 20 А Those ten firms included the 15 cheese plants. Okay. And those ten firms represented 36.5 21 0 22 percent of the NASS cheddar cheese price that is reported 23 according to your testimony? 24 Those 15 -- the production reported on the survey А 25 for those -- the cheese production reported by those 15

1 plants represented 36.5 percent of all U.S. cheddar cheese 2 production reported by NASS in the dairy products, not the 3 dairy products prices, but dairy products. So it was total U.S. cheddar cheese production --4 5 0 That is total U.S. cheddar cheese. 6 А -- in 1999. 7 Not the NASS. Q 8 А That is correct. 9 I'll ask the question that I asked of Dr. Milton Q 10 yesterday. Does the NASS reflect the CME price or does the 11 CME in cheese reflect the NASS price? 12 Well, I think it -- the NASS price tends to Α 13 reflect the CME price. Not mirror, but reflect. As I 14 stated in my testimony, one of the problems with the CME is 15 that it is a market in the Chicago region. And for the 16 cheese, it is cheese priced at a point of Green Bay, 17 Wisconsin. 18 And in addition, in the NASS survey, as Mr. Milton 19 testified to that, you know, might be a penny or two or 20 three plus or minus the CME price. But we don't know the relative volumes that are traded at a penny or at two 21 22 pennies or at three pennies except in the NASS survey where 23 they volume weight for those transactions. 24 You indicate at page 9 that the plant -- of your Q

25 testimony, that a plant if their make allowance was too low

1 does not have the ability to get that price out of the 2 market because, as I understand your testimony, in fact, I 3 think your language was, "The result is always the same 4 because the pricing formula acts as a ratchet." 5 Α That is correct. б So that means, as I understand it, that the plant 0 7 sells cheese at another two cents, reports that to NASS. NASS announces that price, subtracts off the make allowance. 8 9 And what they gained up here comes up because the base has 10 risen. Is that what you are saying? 11 А And, of course, all that presumes that that plant 12 is able to extract two more cents in a competitive market. 13 I understand that. 0 14 А But, yes. Yes, that is what I am saying. All right. And isn't that exactly the problem 15 Q 16 with the NASS, that it will cap the ability of plants to --17 and the incentive for plants to obtain higher income from 18 the marketplace for their product because their margin --19 their make allowances are locked in between the gross price 20 that they sell it for and what they have to pay producers? А Could you repeat that? I am not sure I follow 21 22 exactly. 23 Isn't that one of the problems of the NASS in this Q formula that is here today --24 25 А Okay.

1 -- is that the plants will have no incentive to 0 2 sell milk at a higher price because if they do, they have 3 got to pay it back to the producers on the raw milk price 4 because of the built-in fixed make allowance in the formula? 5 Α Plants don't determine the price. The market determines the price at which they sell their product. And б 7 that is an interaction of supply and demand. Your statement 8 -- or your question is just looking at the supply side of 9 the equation and, you know, as if plants determine every 10 day, well, I am going to sell cheese for X dollars today and 11 tomorrow I might sell it for another X dollars. That -- it 12 is the market that determines that. 13 Well, if I suggested that, that is not what I am 0 14 saying. That the plants you would agree have the ability to 15 exert some influence on the price of their product. 16 Well, they can -- by modifying how much they А 17 produce and then that will get -- if there is the price 18 signal that, you know, there is too much cheese available in 19 the market, you would expect as rational agents that the 20 price of cheese would come down. That, in turn, will reduce 21 the minimum price to farmers and will adjust it to milk 22 production level. It is not the plants that are adjusting 23 their level of production in this case. It is the signal that is sent to the underlying raw input which is milk. 24 25 Q But a plant can change the product mix that it has

1 and other things to --

25 They do do --

2	A If they are multi-product plants, that is correct.
3	Q You also testify in here, you make the statement
4	that, "If we adopt the CME as the pricing, that the ability
5	to have futures contracts on cheese will be greatly limited
6	under regulations of the CFTC." Do you recall that
7	testimony?
8	A Yes, I do.
9	Q Have you seen anybody in here who has suggested
10	that the NASS survey be discontinued completely or just
11	being discontinued for the use of setting prices for
12	producers?
13	A No, I have not seen that. It was our discussions
14	at IDFA that the survey was begun for the sole purpose of
15	providing price input data for Federal Order minimum
16	regulation when it was first begun as the cheddar cheese
17	price survey when the NCI moved to the or, excuse me, the
18	National Cheese Exchange moved to the CME. And then it was
19	expanded as a result of the proposed rule that suggested
20	that they needed additional product prices.
21	Q But there are also other surveys that NASS does
22	for other products that is not being used to set prices.
23	Isn't that correct?
24	A Not on a weekly basis like this to my knowledge.

1 Q Livestock?

2 -- monthly prices. I am not familiar with NASS's А 3 livestock price reporting. I know AMS does market reporters 4 and reports weekly livestock prices. 5 0 You would agree even if it wasn't set for price, б that this information is useful as an economist and a 7 statistician? 8 А Yes, I would agree with that. 9 Yes. So it has value to the industry over and Q 10 above just being used to set prices. Isn't that correct? 11 А Well, it is a reflection of the actual weighted 12 average transaction prices that are out there in the 13 marketplace, something the CME does not provide. 14 Q Right. But going back to my point, if the CME is 15 used to set the cheese price in the formula but they 16 continue to do the NASS reporting so that the futures can go 17 against the -- you know, settle against the NASS price, then 18 that argument would no longer have any merit. Would you not 19 agree? 20 А Except that -- well, no, I don't agree with that because I -- you get into the issue of the Class III price 21 22 is based on the CME prices. And it is the volume traded on 23 the CME that goes into that Class III or Class IV -- which 24 they have just recently been approved -- contract. It is 25 the -- you know, it becomes circular.

1 It is the CME cash price that is going into 2 setting the Class III and IV prices. And the volume of the 3 products that are traded on the CME I would expect being so 4 much lower than what is reported in the NASS I believe would 5 have some impact. Isn't there also the case that plants will find an б 0 7 incentive to index off of the NASS rather than the CME for 8 the selling of product? 9 А I don't see that as a problem. Over time, the 10 circularity argument doesn't hold up because it is the 11 market that determines the price for cheese, butter, powder, 12 dry whey. It is both supply and demand conditions that 13 determine that. And if there is not enough being produced, 14 whatever the NASS price was last week, if the market 15 collectively decides there is not enough there, the price is 16 going to go up. 17 Q You indicated earlier in the situation of a competitive market, if the price paid to producers is too 18 19 low, that you would anticipate a supply response with less 20 milk coming from the producers, right? That is correct. 21 А 22 Q And in time, plants would have to raise their 23 price to attract that milk supply. 24 Plants wouldn't raise -- well, their price paid to А

25 farmers, yes, that is correct.

1 Q Okay.

2 If they wanted to attract the same milk supply, А 3 that is correct. That same milk supply. But isn't it true that 4 Q 5 there are alternatives to raw milk to the plant? б А I indicated in my testimony there is alternatives 7 to raw milk. 8 0 Right. That is correct. You can purchase nonfat dry milk 9 А and butter or other types of butterfat products and store 10

11 them. Of course, in comparing to your raw milk costs, you
12 have the costs associated as indicated in the make allowance
13 -- the cost of turning the original milk into those
14 products. And then you have got the cost of storing. And
15 then you also have any additional processing costs related
16 to using those products as opposed to using a liquid milk
17 input product.

18 MR. YALE: One moment, please. Thank you, Your19 Honor. We have nothing further.

JUDGE HUNT: At this time, we will take a tenminute break before we have the next questioner. And during the break if anybody here wants to testify today because of time restraints, come up and let me know and we will see if we can work something out. All right? We'll see you in a few minutes.
(Whereupon, a brief recess was taken.) 1 2 JUDGE HUNT: All right. I will resume the 3 questioning of Dr. Yonkers. And the next person to have some questions? Maybe you better wait until a few more come 4 5 in. б THE WITNESS: No. 7 JUDGE HUNT: Mr. Cooper, you have any? 8 MR. COOPER: I just had a quick question or two. 9 EXAMINATION BY THE USDA BY MR. COOPER: 10 Do you have Dr. Ling's exhibit there by any 11 0 12 chance? 13 А Dr. Ling's? 14 Q Yes. No. 15 А 16 Q The one-page table. 17 А The Reporter probably --18 Well, let me give you a copy then. On the cheese Q plant column, I think it indicates that the survey --19 JUDGE HUNT: Could you use the mike, sir? 20 21 MR. COOPER: I'm sorry. BY MR. COOPER: 22 23 0 I think it indicated on the cheese plant column 24 that the survey included 12 cheese plants? 25 А Yes.

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Q With an average production of 52,761,901 pounds?
A That is correct.

Q And I think he testified that if you multiply that
by 12, you get the total cheese production in the survey
which would be 633 million some-odd pounds.

6 A Okay.

Q It doesn't say how much any particular plantthough had of that 633 million pounds, is that correct?

9 A That's correct.

Q If, for instance, we assumed as a hypothetical that ten out of those 12 plants each had six percent and two out of those 12 plants each had 20 percent. Now, if the ten smaller plants had higher costs, would that not result in the weighted average being higher?

15 A No, because the simple average would have been 16 higher. You would have been taking the simple average of 17 those ten plants having those higher costs. Obviously, 18 their cost is higher. And then you add the next two. It 19 wouldn't bring that simple average down.

The simple average still would have been higher than the weighted average because there are ten plants with higher costs there. And it is not by volume. I mean, that is ten out of 12, whatever percentage that is. You are talking about having a weighted average where 60 percent of the cheese, a lower percentage is higher cost.

1 You would not get a higher weighted average than 2 the simple average. It all goes back to the simple average. 3 We are comparing the simple average to the weighted average. 4 And if you have got ten of 12 plants are high cost, the 5 simple average is going to be high. That is the point of my testimony that -- or in answer to that question that you б 7 would expect the weighted by volume average to be lower. 8 Even if those -- even if more of the volume was of Q 9 higher cost than was of lower cost. 10 Α No, no, no. In this case, a higher percentage of 11 the plants are higher cost. In your example you just gave, 12 ten of the 12 plants which is a higher percentage than the 13 volume number you just gave, those plants had a total volume 14 of 60 percent of the total. The ten-twelfths -- I don't have a calculator in 15 16 front of me, but it is greater than 60 percent. So that 17 simple average would have a higher average. So you are 18 saying that the -- it is the average would be taking each of 19 those 12 plants' manufacturing costs. 20 Q How is the simple average not lower if it is based on two plants that have lower costs? 21 22 А In --23 The average for the ten plants that have the Q higher cost and add to that the average for the plants, the 24

two plants for a lower cost. Aren't you going to come out

25

1 with a simple average that is lower?

2	A In this case, in this simple average by my quick
3	calculations, ten-twelfths is about 87 percent of the plants
4	in the simple average have high costs. In the weighted
5	average, only 60 percent of the volume has the high cost.
б	The weighted average by definition would be less than the
7	simple average because there is a lower volume at that
8	higher cost.
9	It is based on the percentage of going into the
10	calculation, the percentage of either the plants or the
11	volume that have the high cost. If there is ten of the 12
12	plants in the simple average, that is 87 percent of them
13	have a high cost. The simple average is going to be high.
14	When you go to a weighted average, you are only weighting
15	those high costs at 60 percent. The other 40 percent have
16	lower costs.
17	Q Why are you weighting on the simple average?
18	A You are not weighting. Each one counts one
19	one-twelfth. It is the ten of them count a total of 87

20 percent. And each one counts equally.

21 Q Does each one count one-twelfth or do they each 22 count an average of one-twelfth? In other words, if one 23 plant -- if three plants -- let me --

A I mean, in a simple average, each plant countsjust the same as every other one.

1 Q Exactly.

2	A So if you had ten high cost plants, in a simple
3	average, they would be 87 percent of the survey. The other
4	two would only represent 12 percent. So you would be taking
5	the higher cost, let's say those ten plants all had an equal
б	cost that was higher than the other two.
7	You would multiply their average cost times 0.87
8	and the lower cost times 0.13. When you do it on the volume
9	weighting, the higher cost times 0.6 and the lower cost
10	times 0.4 in the weighting, the weighted average is by
11	mathematical construct. The weighted average is lower.
12	JUDGE HUNT: Yes, Ms. Brenner?
13	MS. BRENNER: I just have a couple of questions.
14	And as long as this mike is on, I would like to use it.
15	Then we can turn it off again.
16	BY MS. BRENNER:
17	Q You indicated that a recommended decision is
18	necessary in this proceeding. Yesterday, Mr. Coughlin
19	testified that NMPF would like to see a tentative final
20	decision with an interim final rule if a recommended
21	decision wasn't going to be possible. Would you would
22	your organization have any objection to that procedure?
23	A I am not familiar enough with what that entails in
24	the Administrative Procedures Act.
25	Q It does well, I'm not sure it is in the

Administrative Procedures Act. But it does allow interested
 parties an opportunity to comment.

A And that is really what we are looking for. We are not advocating you not meet the deadline by Congress. But we are really looking for the opportunity to provide input. We felt that was very useful to you after the proposed rule came out was to obtain industry comment. And we were looking for that opportunity again.

9 Q It would involve the tentative final decision 10 going into effect before the comment period.

11 A Yes, and our concern with that is it is always 12 difficult to then change something back out. I know you can 13 do it. But it -- we are concerned with how the reaction to 14 that would be among members -- or among milk producers or 15 plants that may be affected by the change to have it go into 16 effect and then have the comments come in and say, you know, 17 no, it wasn't and we are going to go to another system.

We are -- your -- you know, one of the key things we are looking for here is closure on this whole issue. We went through a three-year process to get to the point where we are going to have a new final rule. And now we are back in right away changing it again. And our members are looking for some clear direction of what the pricing system is going to be for longer than a one-year period.

25 Q Well, I think the whole industry would probably

like that. In the survey of cheese plant costs that NCI
 undertook, was there any attempt to follow the same
 methodology that the state of California uses in their
 manufacturing cost studies?

5 Α We felt we neither had the time nor the resources б to hire examiners and auditors to go into the plants and 7 calculate that data. So, you know, the thought had come up as how do you structure this. And, you know, the best thing 8 9 to do would be to actually have audited examined data. But 10 we did not have the resources nor the time commitment to do 11 that. And quite frankly, our members felt that the survey 12 process, if it included a sufficient volume of cheese, 13 wasn't necessary for that.

Q Okay. There was another piece of information you were indicating that you could come back and supply later in the day or later in the week. Would you also be able to supply the information that was requested about the outcome of your analysis or of the effect of your proposals on pricing?

A Well, in -- you are looking at on minimum pricing. Once again, we are -- you know, our membership is opposed to looking at strictly the impact on minimum pricing because very often that is assumed to be the market impact of all these proposals. And we --

25 Q I'm not sure what kind of analysis you did. But

you indicated that you did it. You couldn't remember what 1 2 the outcome was. But you had it. 3 А It was input for our membership in determining our 4 testimony. It was not in my testimony. 5 0 That -- yes, I would agree it was not. б А Right. We elected not to include that in my 7 testimony. So --8 0 Okay. 9 А -- I think the answer is no. MS. BRENNER: Okay. Thank you. That is all I 10 11 had. JUDGE HUNT: Yes, sir? Would you please state 12 13 your name, please, so we have it for the record. 14 MR. McCLUSKEY: Yes. Mike McCluskey. I am a 15 producer and also represent select milk producers. FURTHER EXAMINATION BY PARTICIPANTS 16 BY MR. McCLUSKEY: 17 18 Bob, I have a few questions in regard to the Q concept of this make allowance and allowing it to be -- to 19 20 make the error on the high side and more from the areas of marketing milk that I am familiar with which is the western 21 22 United States. 23 You would agree that there is a lot of 24 consolidation going on in the industry. You mentioned that

through some of your testimony. And that is occurring more

25

and more in these western states. We are seeing proprietary
 cheese plants becoming more dominant in those areas.

3 And bargaining co-ops like myself and independent 4 producers end up selling milk to these plants. And these 5 are large producers also in these areas that are selling this milk in the example that I am going to try to use here. б 7 And you also mentioned that for those adjustments, 8 it could take two to three years for these -- you know, it 9 is not a month-to-month occurrence. It could be one to two 10 years I think is the term you used. Not two to three. I'm 11 sorry.

I think you said one to two years for this milk adjustment to occur for the milk to start dwindling off so that the proprietary cheese plant would recognize that it might lose its milk supply. And, therefore, it would be appropriate to raise the milk price to be able to -- just enough to keep these people in business and keep them around.

19 A Right.

Q So, you know, your two to three cents or 30 cents a hundred-weight that the error might be, also I want to address that. That is a significant number. Would you agree that that is a significant number in a producer's income on the western United States? I mean, a 30 cent per hundred-weight is a huge -- in some of the good years, that 1 is your profit per hundred-weight.

2 It was also an example that I used for this. I А 3 was not suggesting that the make allowance be that much 4 higher above the costs of manufacturing. As a matter of 5 fact, my entire testimony focused on getting it right. The point of the testimony and I think what you are getting at б 7 is I pointed out that the market can adjust. There are 8 mechanisms in the market that can allow adjustments to occur 9 if you set too high a make allowance. There are not 10 adjustments that then occur if you set too low a make 11 allowance. 12 That is the point I am going on. So just to go on Q 13 that premise -- and I agree that will happen. But at the 14 cost of what type of destruction is where we need to --15 where you need to look at. You are right. It will happen. But --16 17 А And we are not advocating too high. 18 But let me finish my point. Let me finish my 0 19 point. So if you are going to say it is a year to two years 20 for this to adjust, you also stated that in your experience in Pennsylvania, the producers jumped around from 21 22 organization to organization based on looking -- always 23 shopping for the highest milk price. 24 I would say that they compared milk prices. And А

25 if there was significant differences, they began

investigating alternatives. And in some cases, they 1 2 changed. I wouldn't say --3 0 That's correct. 4 А -- they all jumped around a lot. But I would say 5 that, yes, they would change --Okay, sure. 6 Q 7 -- if there was a significant difference in their А milk prices. 8 9 Okay. So with all that said, now let me try to Q 10 summarize my thought here. Is that you have an effect of a 11 higher make allowance in areas of the country that are 12 consolidating. We are seeing more and more proprietary 13 plants that will -- as good business people, and I don't 14 blame them, they are going to keep that profit. I mean, we are all in -- we are businessmen like 15 16 everyone else. And they should keep that profit because it 17 is there and only release it when they have to. And you 18 stated that might take as much as two years. And I think it might take longer if you understand the intrinsic economic 19 20 effects on these large dairies. I know of a dairy -- a few dairies that are in 21 22 bankruptcy and they are going on their fourth year. And the 23 banks have to continue working with them. So -- and that's, 24 you know, probably part of their problem, too. But the

point is that they can go on forever losing money.

25

1 It is amazing what can happen with these dairies 2 at a loss for three and four years. So to allow that 3 destruction to happen and allow someone to have this excess 4 amount on a make allowance scares me the way you are 5 presenting your example. I think that -- I like what you б said right now. Your true point is that it be right, that 7 it not be in excess, that it be exactly what it should be. And in doing that, in determining what is exactly 8 А 9 right, you don't want to err on the too low side because 10 there is no way for the market --11 Q And you represent a group of people that I can see 12 where you feel this. And I represent a group of people who 13 are going to tell you you don't want to err on the high

14 side. And that is extremely important. For the same reason 15 that you don't want to err on the low side, we don't want 16 you to err on the high side because that is equally as 17 damaging to you as it to us.

A Well, and my point was that there -- without -without incorporating any flexibility for changes in major costs such as energy or major changes in some other costs associated with operating the plant in the short run, I pointed out that the only remedy -- suddenly you will be found with a too low make allowance. And --

Q And it is interesting. Your remedy was that we would have a hearing that would take a year to fix. And we

1 already agreed that it would take two years for the 2 proprietary plant to give us our money back. 3 А I didn't say it would take a year. I said past 4 experience has shown it has taken at least a year to get 5 those changes through the system. б And we also agree that it will take about two 0 7 years for the milk to start disappearing to get the money 8 back. So, again, the producer is in a worse position than 9 the processor to be able to correct that problem. And 10 that -- my point is that. I mean, I want to make sure that 11 it is clear to everyone here that this error to the high 12 side is as damaging as an error to the low side. 13 Well, I would disagree with that. А 14 Q I can see why you would. And I would disagree 15 with your point. And I hope you understand that. 16 А There is no ability for the market to correct for 17 a too low make allowance. 18 And there is no ability --Q 19 A plant has no ability to do anything else whereas Α 20 if you set too high a make allowance, there is an opportunity for markets to adjust. There is not that 21 22 opportunity -- and I went through several examples of why 23 that does not exist on a too low make allowance. And I --24 and that is my testimony.

25 0 Okay. And in certain areas of the country that we

1 have just discussed, I am not going to repeat them, the same 2 scenarios exist from the proprietary to the producer, that 3 the producer has no way to adjust due to long-term contracts 4 due to lack of competition and consolidation and the ability 5 to hold the price low for a long period of time. 6 And just my last point, and then when it is time 7 to -- because of what you saw in Pennsylvania, that 8 producers will move based on price, they only have to raise 9 that price for a short period of time to give a little life 10 back to the scenario and readjust it down. Thank you. 11 JUDGE HUNT: Yes, Mr. Christ? 12 BY MR. CHRIST: Paul Christ with Land O' Lakes. Dr. Yonkers, am I 13 Q 14 correct that you argued that evidence of a make allowance 15 that is too high is premiums paid to producers? 16 No, I didn't testify to that effect. But I did А 17 say that if the make allowance is set too high, there will 18 be premiums paid to producers for competitive reasons. 19 Okay. If the make allowance is too high, premiums 0 20 will be paid to producers for competitive reasons. Are you aware of any markets in the United States where there are 21 22 premiums above the minimum blend price paid to producers? 23 А Yes. That data is published monthly by USDA. At least they attempt to capture what the over-order premiums 24 25 are on Class I milk.

1 Q Okay.

24

25

2 I don't know of any data that is collected on А 3 premiums paid for any other class of milk. 4 Are you aware of any data that shows the payments 0 5 to producers relative to blend prices such as mailbox б prices? 7 А Well, mailbox prices have other factors in costs 8 associated with marketing that milk that are taken out. So 9 it is not a direct comparison of the minimum blend price 10 because you are taking out the cost of moving that milk. 11 And I haven't looked lately at what other cost adjustments 12 there are in the mailbox price series. 13 Okay. Conceding that there are costs or 0 14 adjustments where the payments to producers are reduced 15 before the mailbox price is reported, those deductions are 16 not made -- are not reflected in the blend price announced 17 by the market. 18 А That is correct. 19 Q Okay. So the market administrator's price report 20 would represent a higher total value or a larger number of factors than would the mailbox price. 21 22 А No, no, no. I say the mailbox price represents 23 adjusting for a larger number of factors because you have

included all of the premiums that might have been paid above

the minimum blend price. And at the same time, you have

1 looked at at least some of the things that are subtracted 2 out in terms of cost of market. 3 Q The premiums -- you recognize that there are 4 premiums above the blend price that may be in the mailbox 5 price. That's correct? 6 А Yes, yes. 7 And some of those may originate from Class I Q 8 premiums. 9 And I am not completely sure -- excuse me -- while А 10 those premiums are paid in the current month, I am not sure 11 how they deal with that when those premiums are, for 12 instance, allocated in terms of operating income from the 13 cooperative. I don't know how USDA handles that. 14 0 If the mailbox price reflects premiums more than 15 the value of explicit Class I premiums, could that imply 16 competitive premiums paid to farmers? 17 А If the mailbox price showed a price higher than the Federal Order minimum by an amount equal to the 18 19 published over-order premium times the Class I use, then, 20 yes, I would agree with your statement. Okay. And if those premiums exist, following your 21 Q 22 logic, could that imply a make allowance higher than 23 necessary to cover costs? 24 Well, in addition to Class III and IV products, А 25 there is also Class II products which are not -- and that is

in January or February's pool nationally. That's about 11 percent of the milk. In addition, there are products made in Class III and IV that are not directly related to the make allowance issue.

5 There is other forms of butter, fat production, 6 anhydrous butter oil. There is other types of cheeses that 7 are produced. There is other dry milk products like dry 8 whole milk that are not part of that.

9 And to the extent that the market at any one point 10 in time may be generating a higher relative price for any of 11 those products relative to the products we are using, 12 cheddar cheese and butter and nonfat dry milk and whey, you 13 could see over-order premiums that are associated with that 14 that are unrelated to the make allowance issue for cheddar 15 cheese or for butter or for nonfat dry milk or dry whey.

16 Q Factors other than make allowance that influence 17 premiums being paid to farmers.

18 A Oh, absolutely.

Q So if you observe prices that are higher than
Federal Order minimums and not easily accounted for by Class
I premiums, it could be any one of those factors.

22 A That is correct.

23 Q And one of those factors could be a make allowance
24 higher than necessary.

25 A It could be.

1

MR. CHRIST: Thank you.

2 JUDGE HUNT: Yes, ma'am. In the back. And would 3 you state your name, please. 4 MS. DANIELSON: Nancy Danielson with the National 5 Farmers Union. 6 BY MS. DANIELSON: 7 Good morning, Dr. Yonkers. Q 8 А Good morning. 9 I noted in your testimony on page 9 there is a Q 10 part that you have highlighted. And I believe here you are 11 talking about proprietary handlers. And you have 12 highlighted, "All of the money derived from the increase in 13 the finished product price has gone directly to the farmer 14 in the form of higher, legally mandated, minimum milk price. None of the money derived from the finished product increase 15 16 has gone to the handler." 17 Are you saying here that under the present system, 18 there is really no incentive for the handler to increase the 19 price because he won't get any more money back? 20 А The handler doesn't -- and I indicated this in an earlier question. The handler doesn't determine what price 21 22 they receive in the market. That is only looking at the 23 supply portion of that. And from that statement, yes, you 24 are absolutely right. He could produce twice as much cheese

25 as he does now or twice as much of any other product.

1	He is still going to be earning the exact same
2	amount per unit of product that he was before because of the
3	make allowance and what he has to pay for when I say
4	"earn", the difference between the product price and the
5	minimum price he paid for milk per unit is going to be
б	exactly the same. But for competitive reasons in the
7	marketplace on the demand side, that is where we see
8	adjustments in the output price for these commodities in the
9	wholesale product markets.
10	Q So okay. So he has no incentive to have a
11	higher price. Just one other point. On page 7, you go
12	through some of the various things that could happen to the
13	processor if the make allowance isn't high enough. In fact,
14	I think one of the things you say, "We thought an adequate
15	level of make allowance, the manufacturing plant could not
16	continue to operate because we would have insufficient funds
17	available to pay vital costs."
18	And on page 58, you note that, "The assessment of
19	the committee is on target when it decided to drop out the
20	cost of production to the farmers." And I was wondering if
21	we substituted on page 7 the words, "farmer", instead of the
22	manufacturing plant, wouldn't we reach the same conclusion
23	that without an adequate price, the farmer could not
24	continue to operate as it would have insufficient funds
25	available to pay the vital costs necessary for operating the

1 plant?

And so the question is why do we need to be so concerned that the plants have adequate costs to continue to operate, but when we get to page 58, we don't need to be concerned that the farmers have adequate costs to continue to operate.

7 А This would -- your statement would only be true if 8 we had a fixed margin for farmers between the price they 9 receive for milk and their total costs of operation. As I 10 pointed out, that the plant will never have any more money 11 than the make allowance available for the product price it 12 receives; that there is a fixed relationship between the 13 product price it receives and the minimum price using these 14 product price formulas.

For a farmer, that is not true because their market price can adjust without having their cost of inputs adjust. This minimum price if the wholesale product price is for cheese and nonfat dry milk and dry whey and butter go up, the minimum price paid to farmers goes up and irrespective of what is happening to their costs of inputs. That is not true for manufacturing plants.

22 Manufacturing plants, their cost of primary input, 23 milk, goes right up on locked step with that increase in the 24 price of the product. And that is not true at the farm 25 sector.

MS. DANIELSON: No further questions. Thank you.
 JUDGE HUNT: Somebody else in the back had their
 hands raise. Yes, sir. Would you state your name please?
 MR. OLSON: I'm Ken Olson with the American Farm
 Bureau Federation.
 BY MR. OLSON:
 Q Bob, one thing you states I guess was that it is a

8 normal process, acceptable for producers to go out of
9 business because of cost-price ratios and things like that.
10 Does the same hold for plants?

11 А Absolutely. And our proposal which is using the 12 weighted average, at least the weighted average, and 13 anything -- if you absolutely use the weighted average, that 14 implies that half of the cheese that is manufactured's costs 15 are not being covered in that make allowance. So there is 16 still an incentive for those plants to improve efficiency 17 and lower their costs. And if they don't, they have no 18 choice but to exit the industry.

And so by picking that level, the only thing that would be -- you know, if we had picked a level that was the maximum cost of manufacturing and set it at that, you are right, there would be no incentive. All plants would be covering all their costs. And that is not what we are suggesting here.

25 Q So as it is, at least the make allowance doesn't

mean that all plants' costs are at that level. So there is variation just as for producers, there is variation as far as their cost of production and what the returns are at the set levels I guess.

5 A For plants, there will still be competitive forces 6 for those plants that have costs higher than the make 7 allowance that sets in the formula.

8 Q They have got a reason to what to increase their 9 production -- lower cost plants have a reason to want to do 10 it because they can make more money.

A Well, they can also return it more to farmers and,
 therefore, attract a greater supply of milk.

13 Q But it is not a fixed return to them if their 14 costs are less than what the make allowance is, right?

A I'm sorry. Ask that question again.

15

Q The return to the plant is not fixed at whatever this difference is in make allowance if that cost is less than what that make allowance is. So they've got some incentive to make more profit if they are a lower cost operation. If they are more efficient --

A If their costs are in the lower half of costs that go into that weighted average, total cost of manufacturing, they actually have an incentive in the market to go out and attract a greater supply of milk and make more. I mean, if they are making more than their -- 1 Q I guess it has kind of been inferred that all 2 plants are basically the same and there is no reason to want 3 to --

4 А No, I apologize for inferring that. 5 0 You have also inferred that there is a direct relationship between what they pay to producers and -- what б 7 the price of cheese is and what they pay to producers. I 8 guess I didn't think that was quite the way the NASS survey 9 worked. The -- if a plant increases its price by two cents, does this automatically reflect in the NASS survey price? 10 11 А Well, the only way they can increase that is if 12 the market allows them to do that. And you would expect 13 that other plants would take advantage of the same 14 opportunity. I mean, that would be an indication that there 15 is not enough cheese in an example being produced. 16 And as the price moves up in the marketplace, the

17 fact that NASS is representative of that actual price paid 18 for cheese on a substantial volume of cheddar cheese, I 19 believe it was over 25 percent of the production, then, yes, 20 that is an indication of what is going on in the market. 21 And it will be reflected in the NASS price.

22 Q We've got about 75 percent there that isn't23 covered by the NASS price.

A Well, I don't see that that price could -- the relationship between what that other 75 percent of cheddar

cheese is versus what the NASS survey price is, I see no
reason for that -- I don't know how that could change over
time because everyone would want to buy cheese from those
plants reporting to the NASS survey if it was a lower price.
They would start going to them. And that price would be
pulled up because they would only have a fixed amount of
cheese to sell.

8 You know, if you could -- if you had to pay a 9 higher price for the other 75 percent, you would quit buying 10 from them and you would go over to those NASS plants.

11 Q Well, it seems like when you get the whole prices 12 reported, they have tended to be higher. I don't have data 13 with me now. But it seems like the wholesale prices 14 reported in the market news tend to be higher than what the 15 NASS survey price has been.

A Well, I -- it has been a while since I have looked at what criteria the market news reporters go, but that is not a weighted volume. They are not actually getting transactions that occur. They are getting reports of what is going on in the market. They are not weighting them by the volume.

They could call up one plant and say, yes, I sold cheese for X, but they happen to sell a million pounds. And they call up another plant that says, well, I sold it for X plus two. But they only sold 50,000 pounds. I mean, that

1 is not reflected in that.

2	In an addition, I am not sure that all the package
3	sizes are consistent in what the market reporters get in the
4	sense of the market or if the cheese is exactly the same
5	style. The NASS specifications are very clear. And that is
6	one of the reasons why it is a useful survey, is because
7	they are very consistent and very standard specifications
8	for what is being reported.
9	Q I guess it just seems to me that with 75 percent
10	of the cheese there, there may be some opportunities for the
11	plants to recover additional costs from that 75 percent of
12	the cheese.
13	A As I say, that's if I am buying cheese and I
14	see the NASS survey price is less, I am going to want to buy
15	from one of the plants and I am going to start calling
16	around and finding out where those plants are that are
17	selling cheese for less than what you are implying the other
18	75. The market adjusts for that very quickly. I mean, you
19	are imputing that cheese buyers have no incentive to look
20	for a lower cost source. And I would disagree with that.
21	Q Well, I guess I don't know any data that implies
22	that the rest of it is the same. It is a good indicator of
23	what is happening.
24	A Well, and the other point I would make is that we

25 are talking of all cheddar cheese production whereas NASS

1	has already established they are getting a much higher
2	percentage of that, of what they term, "eligible cheese",
3	which is cheese sold in bulk which is not used in
4	intercompany transfers and is not aged.
5	So there is a significant portion of that other 75
6	percent that for whatever reason has added costs associated
7	with it that we are also not reflecting in the make
8	allowance when we are basing that on just bulk cheese. It
9	could be aging costs. It could be cut-and-wrap operations.
10	It could be additions of other flavorings to the
11	cheese and other further processing of that that could be
12	included in that.
13	Q Does that provide some opportunities for plants to
14	return some additional income and make profits?
15	A Well, it is added additional costs. I mean, every
16	plant would have to look at the you know, what the
17	additional costs are relative to what the market is. But
18	keep in mind, everyone that made the decision to go into
19	that market would suddenly be adding supply to that market.
20	And that does not come without an adjustment in the market
21	price.
22	If you are increasing the supply, you would expect
23	that if there was a premium over the added costs for certain
24	type of cheese, you would expect more people, more cheese

plants in this example wanting to make that type of cheese

which would increase supply and bring that price down over
 time.

3 Q But there are opportunities there where they could 4 make some additional profit, right?

5 A Well, see, I don't know if it is profit because I 6 don't know what the costs associated for doing those added 7 things to the cheese are. We did not survey that and I 8 don't know what the added costs are associated with aging 9 cheese six months versus what you get. I don't have 10 knowledge of that.

So I am not saying that that is profit. You are calling it profit. If there is added cost to the plant, that doesn't mean there is any more money available to pay the farmer after paying those added costs of processing associated with doing whatever it is further you are doing to the cheese.

17 Q I guess I was looking at opportunities the plants 18 could have to recover costs if -- you know, I think there 19 are some ways --

A Well, you are adding costs. You are not just -- I mean, you are actually selling a different type of product. If you decide that, well, you know, I just -- my costs are too high. They are higher than the make allowance for this bulk cheese that I have been producing. I am going to have to start doing something else.

1 Well, then you are adding a new processing line to 2 cut and wrap or shred or whatever else they are doing in it. 3 There is added costs associated with that. And every plant 4 will evaluate that based on what their anticipation of the 5 market demand for that type of cheese is and their impact б they would have on the market for that demand. 7 But, again, there is some potential there? Q 8 There is an opportunity for them to produce a Α 9 different type of cheese. But it comes -- it doesn't come 10 without a cost associated with doing so. I --11 0 Yes, it is a business decision. I guess I 12 wouldn't expect that we would have those types of products 13 if there wasn't some profit to made from it. And now that's 14 fine. I guess the --15 А Well, but over time, that profit won't be there 16 because if there is profit, it will attract additional 17 plants doing that. That is the whole competition in the 18 market. If you stop making a bulk cheddar product in the market in order to make aged cheddar, for instance, that 19 20 means, number one, there is less supply over here in the bulk side and there is more supply over here in the aged 21 22 cheddar market.

Those prices, the relationship between those prices over time will collapse to the costs associated with doing that. That is what the competitive market does.

1 MR. OLSON: Well, thank you.

2 JUDGE HUNT: Mr. Marshall?

3 MR. MARSHALL: Thank you, Your Honor.

4 BY MR. MARSHALL:

5 Q Good morning, Dr. Yonkers.

6 A Good morning.

7 Q First, I would like to commend you and NCI for the 8 effort you undertook to put together the survey. And I 9 appreciate that very much. I think the questions I have 10 will be confined to how that data can be interpreted and 11 used. First, let me just ask kind of a philosophical 12 question.

Well, no. Maybe I'll start by asking if I
understand how the survey was compiled. You personally as
you testified were not involved in the compilation. You
sent out a survey form to plants and that data were compiled
by a third party. Is that correct?

18 A That's correct.

19 Q So do you have any personal knowledge of, for 20 example, the -- any data that isn't in what is included in 21 Exhibit 14 about, for example, the ranges of rates or the 22 deviation within various categories?

23 A No, I do not.

Q Hypothetically, I think what you were trying to accomplish -- and my question would be am I correct in this

understanding. My understanding is that you were trying to give USDA a compilation of the total costs of converting raw milk through a manufacturing process into a sale into dollars that are in turn then used to pay for the milk and other factors. The entire cost of that process conceptually is what you are trying to --

7 A Yes. Our motivation was given that the Rural 8 Business Cooperative Service study was used so prominently 9 in the final rule, we felt two things. It didn't -- there 10 were costs which were not included in that because those 11 were just in-plant benchmarking costs.

12 And secondly, the '96 study that was used in -- to 13 helping to determine the make allowances in the final rule 14 represented only four firms in six plants. And we thought 15 we could do better and we were fortunate that we got a 16 response that was better than that.

Q The final rule that went into effect January 1 of this year has two factors that I might refer to as covering the total conversion cost. One is a marketing allowance. The other is a factor that I think is properly characterized as merely the plant manufacturing cost.

And while you or I might have some disagreements about whether that number is accurate or compiled correctly, would it be fair to say that your survey attempts to include both of those categories in one survey? 1 A Yes.

2	Q And I would like, if you would, to ask if you
3	would just turn to Exhibit 33 excuse me, your Exhibit 14,
4	page 33, and the cost categories that are there just so we
5	understand how this was compiled, at least as you would
6	understand it from the directions. First of all, we have a
7	category called, "General and Administrative."
8	And as I recall your testimony, one of the
9	concerns that NCI has about Dr. Ling's study is that it was
10	focused narrowly on plant operations and specifically
11	excluded plant administration. Is that correct?
12	A That is correct.
13	Q So here you have got a category for general and
14	administration administrative costs. Do you recall any
15	of the details of the instructions as to what might have
16	been asked to be included in that category?
17	A If we included in that you look at our survey
18	form versus this page-33 table, we did the page-33 table on
19	aggregated cost categories because that is all we had from
20	California. And as I recall in the general and
21	administrative, it included the administrative cost
22	category, the taxes, the insurance.
23	And I think that may be all that was and
24	miscellaneous costs. And I am not certain about insurance.
25	That may have been in the other non-labor processing costs.

But I know that administrative costs, taxes and

1 2 miscellaneous costs were included in that general and 3 administrative category. 4 With respect to marketing or what some people 0 5 might call marketing and sales expense, do you have an б understanding of how that might have been interpreted by the 7 survey respondents in terms of the administration of the 8 sales process? 9 Yes, I don't have any detailed information on how А 10 they responded to putting individual cost items into those 11 individual categories. 12 And would it be fair to assume that that might Q 13 reflect the nature of their particular operation and how 14 they broke down their costs as distinct from how you would 15 have wanted the costs? 16 I wouldn't disagree with that. Α 17 0 You would not disagree? I would not disagree with that. 18 А So, for example, the costs of the computer system 19 0 20 that sends the billing out from the sales office might be included in the marketing expense or it might be included in 21 22 the G&A expense, is that correct? 23 А I have no knowledge of that. But we will have some members who actually responded to the survey that may 24

testify to that later. 25

1 In any event, the total cost -- in your case, the 0 2 survey showed 16.79 -- would not be any more or less 3 accurate because of this allocation problem? 4 No, it would not. А 5 0 But if we are interpreting this for purposes of б what -- of drawing a parallel to the final rule, then there might be some confusion as between the operating costs 7 8 versus marketing costs in applying your table to the current 9 format, would there be? 10 А I don't recall where the marketing costs came from 11 in the final rule at the moment. But we -- our legislative 12 and economic policy committee at NCI decided that if that is 13 what our marketing costs showed, it would be very difficult 14 to argue for a larger one at this hearing. 15 0 At this hearing. All right. With -- I believe I 16 have asked this question. But just to make sure, we heard 17 from Dr. Ling a rather astonishing range of costs within his 18 survey. Do you have any information about what the range of 19 total costs --20 Α We did not have the range of total costs reported 21 to us.

Q Philosophically, would it be fair to say that if one were to use the weighted average, that as the total make margin allowed for in the Federal Order formula, would it be fair to say that half of the volume would be produced in

1

plants whose costs were higher than that average -- than

2 that weighted average?

3

A That is correct.

Q Would it be NCI's position that an allowance ought
to be established based entirely on the mathematical
weighted average?

7 A No. And that's why in my testimony on page 33, we 8 specifically stated that we proposed that USDA adopt as a 9 make allowance for cheese a value no lower than the 16.87 10 volume weighted average because we do feel it is important 11 to recognize that the implications of setting too high 12 versus too low a make allowance as I outlined earlier in my 13 testimony.

14 0 So that would be a policy consideration you would 15 urge USDA to include in its thinking. Is that correct? 16 А I also think it is an administration of how you 17 administer minimum pricing. It is not just a policy 18 decision. It is the how much market structure impacts do you wish to derive from fixing this relationship between the 19 20 price of cheese and the minimum price of milk.

Q Market structure impacts. Would that -- one of the things that I was not clear about in your testimony is several times you referenced disorderly marketing conditions. And I was gathering that there would be some concern that if the make allowance or the total impact of

1 all of the formulas were to put a number of plants in a
2 position of not being able to operate, that you could see
3 disorderly marketing conditions. Is that what you mean by
4 the market structure impacts?

5 A Yes. It would take plants away. It would take 6 outlets for milk away and could result in greater distance 7 movements of milk or actually milk being sold at distressed 8 prices outside of the order system merely as an artifact of 9 the regulation.

10 Q Okay. Back to the nature of your survey data, in 11 this table that is shown on page 43 of Exhibit 14, would you 12 imagine that there are costs identified by your survey 13 respondents in any of these categories for the procurement 14 costs that you mentioned should be considered in the survey? 15 А We specifically didn't ask them to exclude 16 procurement costs. And we in developing the survey 17 anticipated that that may -- some of that may show up in 18 labor costs of the field staff associated with getting the 19 milk. We assume some of it might appear in general and 20 administrative relating to shipper relations or -- you know, we didn't know where it would show up. We did not feel a 21 22 need to specifically break out and identify procurement 23 costs. We felt that --

Q You also -- excuse me. Did I -- did you finish?
A Well, we thought they would be included in other

cost items. And we saw no reason to specifically separate those out.

3 Q You also don't show ingredient costs for what I
4 think are obvious reasons. For a plant -- and I can
5 represent to you that there are some --

6 A What do you mean ingredient costs?

7 Q Milk.

1

2

8 A Oh, that's correct. We weren't after their cost 9 of milk inputs. We were after all the other inputs other 10 than milk in the costs.

11 0 I can represent to you that there are some firms 12 in our area that buy all of their milk or have at times 13 bought all their milk from outside sources, i.e. 14 cooperatives like ourselves for whom their internal 15 accounting would show any service charge that we charge for 16 our procurement costs, they would show that as an ingredient 17 cost which means that such a plant would not necessarily 18 have thought to break that out as a factor for your survey. 19 A Yes. I have no knowledge of how individual plants 20 account for such charges. And as I say, we will have some members that will be testifying and perhaps they could 21 22 answer that question.

23 Q One of your -- I guess based on that, let me just 24 ask another question. Sometimes a plant needs to go some 25 distance at certain times of the year to pick up a milk
supply. And that involves having to pay for delivery costs to the plant. Do you see a category here in your survey in which people might have included delivery costs of raw milk, transportation, hauling?

5 A Well, once again, we asked that that not -- all of 6 the non-milk costs be included. But there is not a specific 7 category to address that issue.

8 Q On the other side of the equation, when you have 9 got packaged products that are ready for sale, is there any 10 category here that would include delivery costs?

11 A I assume that that would be in the marketing12 function. But I don't know that.

13 Q Really?

A Because we asked people to -- let me go back. We included marketing cost because cheese and dry whey wholesale prices in the NASS dairy products prices report assumed the product has been marketed. So we were asking them to get the point of the price they received. We wanted all the costs associated with actually getting to the point at which they received the money for the product.

If that meant the product was picked up at their loading dock, there wouldn't have been any costs associated with delivering that. If it was -- the transaction actually occurred at another point in time and they were responsible for moving it, I would have expected that to be included in 1 the marketing costs.

2	I mean, since we are using the NASS dairy products
3	prices report, we want to get at the equivalent prices that
4	are reported there. And we asked for all the costs up to
5	and including that point.
6	Q Well, the NASS survey, if I recall, is a survey of
7	prices received FOB the plant.
8	A Okay. Well, then that is
9	Q So let's just take this one step at a time then.
10	A Okay.
11	Q We if we have a if in your survey concept
12	the plant receives a higher cost for the product
13	A A higher price?
14	Q Excuse me, a higher price for the product to
15	reflect the higher costs of transportation, you would want
16	them to back out that higher cost of product not to account
17	somehow for the higher revenue. I think that is what you
18	were testifying.
19	A Yes.
20	Q And that is confusing to me because I don't have
21	revenue in this survey. In fact, let me suggest to you that
22	0.001 cents per pound isn't going to transport product very
23	far.
24	A I well, I and if I will agree now with

25 your statement that since it is FOB, the NASS survey is FOB

1 plant, we asked for FOB plant prices --

2 0 So in asking --3 А -- costs -- FOB plant costs to be included. 4 Q Right. Okay. But --А 5 How individual plants dealt with that when they were getting, you know, FOB customer, we did not have б 7 specific instructions. 8 Q So I think what you are testifying is that you 9 would be surprised if plants responding to your NCI survey 10 had included delivery costs. 11 А That is right. That was not our intention to get 12 them to include those because we were intending to get the 13 FOB plant costs. 14 0 Well, in fact, just to clarify that, if you look 15 at the page that is not numbered in your Exhibit 14 --16 The general survey instructions, yes. А 17 0 Yes. 18 "All cost data is to include all in-plant costs of Α 19 moving farm milk from the receiving deck to the product 20 delivery deck. And thus transportation costs are not called for, 21 0 22 are they? 23 А That is correct. 24 The reason I asked that question was not to 0 25 distract us onto that, but because on page 23 of your

1 testimony, you referenced delivery costs. And I refer to a
2 sentence on page 23 that begins about halfway down the page.
3 I will read it in its total.
4 "This must include manufacturing" -- "the costs of
5 manufacturing must include all costs beginning with those
6 raw procurement costs not directly reflected in the price

paid for raw milk all the way through of marketing bulk commodities in the wholesale dairy market; in other words, all costs commensurate with producing marketing and

10 delivering."

11 A The products for which the prices are gathered by 12 the NASS dairy products price survey. So, yes, if they are 13 delivered at the FOB plant dock, then that is correct.

14 Q All right.

A That is what we were looking for in our survey. I don't -- I think my statement is consistent.

Q Well, we've talked about some costs that you think should be considered that are not included in your survey. You have said that you think -- testified that you think USDA adopts should be not less than the weighted average cost in your survey. Is IDFA asking, is NCI asking for a larger number than the 16.9?

23 A 16.87.

24 Q I'm sorry, 16.879 cents --

25 A We can round it.

1 Q -- that is in the survey?

2	A We are asking that USDA consider all data
3	available on what the actual costs of manufacturing are and
4	also the market implications of setting too low versus too
5	high a make allowance in determining the make allowance
6	which will be used in the product price formulas. And we do
7	we are urging USDA not to adopt a manufacturing allowance
8	a make allowance for cheese of less than 16.87 cents per
9	pound of cheese.
10	MR. MARSHALL: I think I have asked all the
11	questions I wanted to ask. Thank you very, very much for
12	your help.
13	JUDGE HUNT: Yes, sir? Mr. Coughlin?
14	BY MR. COUGHLIN:
15	Q Good morning again, Bob.
16	A Good morning.
17	Q In your survey, did you collect any information on
18	what percent of plant capacity that reporting plants
19	utilized during the reporting period?
20	A No, we did not.
21	Q Would you agree that co-ops who operate balancing
22	plants, some of which may have been may or may not have
23	been in the survey would have a greater fluctuation in
24	terms of the how much milk was used during certain
25	periods of the year?

A If the purpose of having the plant is to balance
 the market, I would agree with that.
 Q Okay. I think you indicated earlier that the

4 participants knew that the information being collected might 5 be used at this hearing?

6 A That is correct.

Q You testified that your survey included data from
15 cheese plants operated by ten firms.

9 A That is correct.

10 Q Did each of the ten firms report data for all of 11 the cheese plants they operated?

12 A I don't know the answer to that question. They --13 I don't know the answer to that question.

Q Okay. Is there -- what incentive is there if you are reporting data that you knew might get worked into what your cost of milk was? Is it the -- is there any incentive to make sure that it is on the low side or would there be an incentive for the proprietaries to make sure it is on the high side?

A We ask the plants to use their most recent 12month period they could and specifically were given a preference for the most recent period that had gone through an internal plant audit. We wanted to get and our board and our committees were committed to getting the actual total costs of manufacturing. 1 2 Q Okay. I do intend to follow up if you have individual representatives here.

3 A Okay.

Q I intend to ask them relative to they report all of their information for all of their plants. And if they didn't, well how did they select the plants that they chose to include.

8

JUDGE HUNT: Yes, sir?

9 MR. PACHEKO: Good morning. Francis Pacheko with
10 National Farmers Organization.

11 BY MR. PACHEKO:

12 Q Am I correct in understanding your logic of 13 economic movement of the overage and make allowance a plant 14 receives due to a fixed level make allowance goes to the 15 producer or main competitive in the market?

16 А If a make allowance is set at a level that is 17 higher than the actual total cost, it is our position that 18 that will go to farmers because of competitive market situations. We know it will go to farmers of cooperative 19 20 associations either in the form of their milk price as an over-order premium above the minimum or when the co-op 21 22 distributes its operating income at the end of the year. 23 And in order to remain competitive in the market, 24 other plants are going to have to meet that total price 25 being paid.

1 In terms of it being at a fixed level and since it Q 2 is used at a weighted average as you said earlier, some of 3 the plants are going to have an incentive at a fixed level 4 always because there is going to be some higher or some 5 lower, correct? I don't know what -- you are referring to the б А 7 incentive. But, yes, some plants -- plants will always be positioned differently --8 9 Q At different --10 А -- relative -- their actual costs of manufacturing 11 for any individual plant is going -- by coincidence -- it 12 would be coincidence if it were exactly the same as the 13 weighted average across plants or the weighted -- or what 14 USDA uses as the make allowance. 15 Q So assuming we are talking about an efficient 16 plant and larger plants are usually more efficient, 17 logically can this excess be used as a discounting factor on 18 the sale price of cheese? That is an issue for how cheese prices are 19 А 20 reported on the NASS dairy products prices survey. And when you say at a discount, if they are reporting a lower price 21 22 paid, I go back to what I have said earlier. Once again, 23 buyers of cheese are going to want to buy it from the lowest 24 cost source. And the competition in the market will be 25 driven by the availability of cheese at different prices.

And that will be affected in the NASS dairy products prices
 report.

Q So basically, it is possible that an efficient
plant instead of turning that money out to the market to the
producer, can basically turn that as a discount factor.

A Well, you are back to the market for his cheese is set based on his willingness to supply and the demand the cheese. And if the demand for cheese is such that there is a price in the market that everyone is paying, I see no incentive for the plant to come in and start selling his cheese at less than that.

12 Q To gain market share, for instance, would that not 13 be an incentive?

A Well, once again, then he has to go out and procure a larger supply of milk than is currently available in the marketplace and is currently being shipped to him. You would expect that he would have to put more money into attracting a larger supply of milk than he currently has.

19 Q If -- is there not discounting that happens on 20 cheese pricing?

A I have no knowledge of what, you know, discounting -- the whole purpose of the NASS dairy products prices report is to get at the actual transactions value, the actual sales value when cheese changes hands. And that is -- and it is weighted by the volume. So if there was a

1 significant volume of cheese selling at a few cents less 2 than what was reported last week for NASS, that will be 3 reflected this week and will pull down that weighted average 4 price. 5 0 So basically, that can happen then. The market б can respond if there is a discount on sale price --7 Could you ask that --А 8 -- because it is being shown in the NASS price. 0 9 А That is right. 10 0 Okay. So basically if this were to happen, if 11 this, you know, scenario were to happen, if a discounting 12 factor were to happen, logically would this not economically 13 affect the producers' price in a double way? First of all, 14 he would be hit from a higher make allowance which would 15 reduce his price. And then that discounting factor would in 16 turn reduce the price that his milk is being based upon. So 17 it would be a double negative effect on the producer pay 18 price.

A And there would be a supply response and that plant would no longer be able to do this. The cheese price would come up. We are back to the competitive market factors that exist for milk in a marketplace and in the marketplace for cheese.

Q We are assuming that the producers can respondquickly. And basically, the only way a producer can respond

is basically by going out of business because his cash flow
 will not allow him to stay in business under these two
 scenarios.

Enough producers would either have to go out of business because once you are done with fixed costs -- just like a plant does not like to reduce its amount of production coming from a plant, producers for cash flow reasons cannot reduce the amount of milk coming out of their facilities. So, again, under these scenarios, this would be a double negative effect on producer pay price.

11 A If the market was reflecting a demand for cheese 12 that resulted in a lower cheese price over time, demand was 13 not strong relative to supply, that is going to move that 14 price down. It is not the impact of the cheese plant 15 driving that. It is the impact of the interaction of supply 16 and demand.

17 And let me also state that it goes back to my primary argument that on the other side, looking at 18 19 increased prices in the market and how they are returned to 20 farmers, there is actually nothing in the market that the 21 cheese plant or any other manufacturing plant can do to 22 increase the difference between its sales price for its 23 product and the minimum price it has to pay to farmers under Federal Order regulation. 24

That is fixed by this make allowance. That is not

25

1 true to increases in milk price at the farm level.

2	Q So basically what you are saying is under a fixed
3	make allowance, there are some short-sightedness on the
4	demand side because the plant you know, there is no
5	reason under a short market that the plant will gain
6	anything else. But if there was let's say an adjusting make
7	allowance to demand condition, would that not be beneficial
8	for the processing segment of the industry?
9	A Well, you are adding a great deal of additional
10	complexity to the pricing system we have now. And quite
11	frankly, we have a policy position at IDFA that we are
12	looking for these pricing systems to become simpler and more
13	readily understandable. We are not looking for adding
14	complexity to the marketplace.
15	And once again, the consistent theme of Federal
16	Orders going back to the 1937 AMAA has been minimum pricing
17	and allowing markets to work above that. We are not trying
18	to capture every last fraction of a cent of costs in the
19	system in the minimum pricing.
20	MR. PACHEKO: I would agree as far as a simplistic
21	approach. But, however, under today's pricing formulas,
22	that is not going to be achievable. So we might as well do
23	it right and have the factors that are going to return the
24	fair price that the milk is valued at to the producer and to
25	the manufacturer based on a product price. So no more

1 questions. Thank you.

2	JUDGE HUNT: Yes, sir?
3	MR. GALARNEAU: Hi. My name is Clay Galarneau
4	with Michigan Milk Producers.
5	JUDGE HUNT: I'm sorry. Your last name, please?
6	MR. GALARNEAU: Galarneau, G-A-L-A-R-N-E-A-U.
7	BY MR. GALARNEAU:
8	Q Mr. Yonkers, I have one question I have got some
9	difficulty with in your testimony. You testified that
10	market conditions will dictate that returns greater than the
11	make allowance will over time be paid back to producers in
12	the form of over-order premiums.
13	However, you specifically recommend that
14	procurement costs should be included in the make allowance.
15	How can you differentiate over-order premiums from
16	procurement costs? If procurement costs are included in the
17	make allowance, then how will producers supplying non-
18	cooperatives ever realize the potential for greater returns?
19	The processor will continually push the over-order
20	premiums back into the procurement costs and, therefore,
21	ratchet down the pay price.
22	A The raw the procurement costs I am referring to
23	are those costs other than that paid for raw milk. And the
24	raw milk payment includes the Federal Order minimum and
25	whatever over-order premium. You are paying that for the

1

milk. That is not part of a procurement cost.

2 And how can you make that definition stick? Or, I 0 3 guess, I don't know how you would define that, procurement 4 cost. Well, there is -- and I think I did allude to 5 А several things. There is a cost associated with б 7 coordinating milk assembly and timely delivery to the plant. 8 If that is paid in the form of an over-order premium, it is not your milk procurement costs. It is part of your cost of 9 10 milk. It is in -- we are looking for the non-milk costs in 11 this plant. How individual members responded to the survey 12 on this issue, I think you will have to ask them when they 13 are up here testifying. 14 0 Then it sounds like that could be a very -- an 15 area very subject to manipulation. 16 А What you pay for milk is what you pay for milk. 17 It includes a -- we didn't ask over and above the minimum 18 price you paid for milk. We said all the costs over and above what you paid for the milk. And that includes over-19 20 order premiums. MR. GALARNEAU: All right. Thank you. 21 22 JUDGE HUNT: Anybody else? Mr. McCluskey, I see 23 nobody else. Go ahead. 24 BY MR. McCLUSKEY: 25 0 The -- your survey when you sent it out, the

1

respondents knew that these numbers would be used for

2 purposes --

A As input in our preparation of testimony for thishearing, yes.

5 Q Okay. And could you help me with the RBCS numbers 6 on -- as a question? Initially, this survey was done for 7 purposes of certain organizations being able to have some 8 comparison of manufacturing cost so that they could compare 9 themselves with this peers? Did I understand that? 10 A It is a financial comparison -- financial

11 benchmarking.

12 Q Right.

13 A My understanding of the Rural Business Cooperative 14 Service, and I believe that Charlie Ling talked about it 15 being used as a benchmarking --

16 Q That's the way I think I understood it also.
17 Okay. So -- and also, we made it clear here that those
18 numbers do not include certain important factors such as
19 some type of marketing allowance?

20 A We tried to make that clear, yes.

Q Right. And also it didn't include some of the procurement costs and administrative costs. And I think some of the numbers from -- if you would take those specific numbers that you have said that are not included in the RBCS numbers and you allocated specific numbers to those -- I

1 don't know if you have those through your survey. It sounds 2 like you don't. But have you looked at taking the RBCS 3 numbers and allocating those costs and adding them directly 4 to the RBCS and see where that number would come up? 5 Α We didn't have this until yesterday and, no, I б haven't looked at that. And once again, you would always --7 you would have the issue that I believe there are some 8 plants that participated in both surveys. 9 Correct, okay. So if I understand this right, we Q 10 got the RBCS numbers that were a group of guys -- or people 11 that got together and said let's compare to see how 12 efficient we are within our plants as compared to our peers. 13 So those people had an incentive to -- because 14 those results, I imagine they got them and they went back to 15 their owners which would be a board of directors or a 16 proprietary ownership. And they would show them the 17 numbers. And they didn't want to be on the bottom of that 18 list I would think. So they had an incentive probably to 19 create a number that was towards the small size. Would you 20 agree with that? If you are doing it for your own -- if you are 21 Α

22 participating in the service so that you can get data that 23 you can use to benchmark your position relative to everyone 24 else, I don't see that there is incentive for you to report 25 anything other than your actual costs in those categories.

Q Right. But if you look at how that information is going to be used coming back and human nature being what it is, is there a possibility that some people would have the sense of probably using their best months? Let's put it that way.

A Well, I think in each case, they are trying to get a 12-month period of data whether it was our survey or Rural Business Cooperative Service. And, you know, quite frankly I am not really going to comment -- I don't think I am qualified to comment on the human nature in responding to surveys.

12 There is a broad study out there of survey 13 research and done by a combination of different disciplines. 14 And I have looked at that in the past and summaries of that 15 in the past. And really, I think what you are trying to get 16 at is what is the reporting error in the survey. And I have 17 no -- the only way to obtain that is actually to go out and 18 either audit those plants or --

19 Q Well, I think -- I think what is in --

A -- or to survey non-respondents and try to get them to submit data and look at if their costs were different than those that responded. We just didn't have that capability to do that in this framework we were doing at NCI.

25 Q Well, what I think is interesting is that we have

1 two surveys here. And National Milk did take some numbers 2 of what you have said are missing from the RBCS and added 3 those numbers to that. And granted, they didn't -- all of 4 the areas that you have mentioned such as administrative 5 costs, I don't think they took a specific number for that. б But they took the others, the marketing and the -- excuse me 7 -- and a few others. And when you add all those numbers, it is still so 8 9 much lower than the average survey that your organization 10 came up with. 11 А I would agree with that. 12 And I think there is some incentive here that 0 13 needs to be taken into account, that, you know, one has an 14 incentive to have, you know, some high numbers. One has an 15 incentive to have some low numbers. So somewhere in 16 between, we probably have got a number that is correct. 17 But, you know, that is the point I am trying to make, 18 obviously. 19 Either both of these have some personal interest

20 in how their numbers come in. And to say that these numbers 21 are totally valid when they are unaudited and there is a lot 22 of personal interest in here is something that is a little 23 scary.

24 But it is a nice balance because you have one who 25 has an interest to have a low number and one who has an

interest to have a high number. And somewhere in between, 1 2 normally the things work out. That was my point of that. 3 But anyway, I think you have stated, and I feel 4 comfortable now, that it really isn't that higher make 5 allowance that you wanted. But you want it to be what it б is, to really try to identify the true cost and establish 7 that. I think that is the position of your organization. 8 А And to take into account the implications that are 9 associated with that. And we have pointed out several. One 10 is the fact that by using that weighted average, you are not 11 covering the costs on 50 percent of the cheese volume in the 12 survey. In addition, you are not giving any flexibility to 13 temporary cost increases such as energy as I identified. We believe --14 Or decreases for that matter. 15 Q 16 Or decreases, you are absolutely right. А 17 Q Sure. Although keep in mind that decreases in those 18 А 19 costs would get us back into the too high make allowance 20 argument which allows for the market -- the market will adjust there. There is no market --21 22 Q I thought we agreed -- I thought a little while 23 ago we agreed it doesn't adjust. There is no -- I didn't agree with that. 24 А 25 Q Oh, okay.

1 А And there is no market adjustment that can occur 2 for a too low make allowance. Would we agree with that? 3 Q I agree on both ways they don't adjust, yes, in my 4 scenario. 5 А And I am not prepared -б Q Okay. 7 -- to answer any questions about the incentive for А anyone to report one way or the other in any of these 8 9 circumstances. 10 0 Right. I understand that. But the point is that 11 if your organization is very interested in having the real 12 numbers --13 Oh, we're -- yes. А 14 0 -- and having the correct numbers in place --15 А Absolutely. 16 -- okay. And that is true of the make allowance. 0 17 But it also would be true of the formulas that are being 18 used and the yields and all these other issues that you have 19 in -- I mean, you want what really is a yield to be 20 represented, what really --And I testified to a couple of the factors that 21 А 22 are in the hearing proposal, the butterfat recover and our 23 position on that and also the nonfat dry milk proposals that 24 would change the yield factors there. We did comment on 25 that in my testimony.

Right. So -- but, again, the intention of your 1 0 2 organization is that whatever those may be, that the correct 3 ones be in there, that truly what the yields are be and not 4 something that is not and that if there is some product that 5 has been forgotten or a division instead of a multiplier, б that all that be corrected. Is that not --7 А And that all the factors associated with those be taken into account --8 9 Q Right. 10 А -- and their implications in the marketplace of 11 erring on one side or the other be taken into account when 12 you determine that. 13 You bet, okay. Q 14 А You betcha. 15 Q So as we discover through this hearing that there 16 are some realities that might not be included in this 17 formula that are truly, in fact, in there, then your 18 organization would probably accept that if that was not 19 accounted for. 20 Α Well, I can't testify to things I haven't -- that haven't been specifically testified to by others yet. I 21 22 mean, we don't have positions on those yet. 23 MR. McCLUSKEY: Okay. Thank you. 24 JUDGE HUNT: Mr. Rosenbaum. Or, I'm sorry, Mr. 25 Berde, go ahead. Go ahead, Mr. Berde.

1 BY MR. BERDE:

2	Q Sydney Berde for United Dairymen I'm not that
3	tall for United Dairymen of Arizona. Would you agree,
4	Dr. Yonkers, that nobody knows what the right price or the
5	right margins are, make allowances are that the Secretary
6	should establish?
7	A I think that data is out there. But
8	Q Well, would you agree that in as much as this is
9	an administered price structure, all that the Secretary can
10	do is try to arrive at an allocation of risk as to who
11	should bear the consequences of either a too high or too low
12	make allowance?
13	A No, because there in our view, there is very
14	little consequences from too high because the markets will
15	adjust. The consequences of a too low make allowance fall
16	on everyone in the marketplace
17	Q Yes.
18	A because if plants go out of business, because
19	they cannot cover all their factors of manufacturing, then
20	you are removing an outlet for a milk supply in that market.
21	So I think that there is you know, there is not a balance
22	of risk there. That there is a clear and striking problem
23	with setting a too low make allowance that cannot be
24	corrected in any way by the market over time.
25	Q If the Secretary sets the make allowance higher

1 than necessary to cover all the costs including the costs of 2 your least efficient plants, that means he has over-3 compensated the most efficient plants, has he not? 4 No matter which point you pick that at, there is А 5 going to be plants -- unless you pick it at the most leastefficient plant, no matter anywhere in the spectrum there, б 7 you are going to have plants that have make allowances, 8 actual costs of manufacturing below what the Secretary 9 picks. And you are going to have plants that are higher 10 than that. 11 Q And if sets the make allowance higher than 12 necessary to cover the costs of your most efficient plants, 13 then the price of milk or the return to producers is going 14 to be lowered, is it not, forgetting for a moment what you have described as a transitional adjustment? 15 16 Could you ask your question again? Α 17 Q Yes. If he sets the make allowance higher than necessary to cover the costs of your most efficient plants, 18 19 necessarily the returns to producers are going to be lowered 20 immediately. I would disagree with that. The minimum price may 21 Α 22 be lowered immediately. But the market adjustments that 23 could occur immediately are not clear to me. 24 Well, those market adjustments may occur or they Q 25 may not occur depending upon time and depending upon the

1 immediacy of the need for the additional milk.

2 I wouldn't disagree with that. Α 3 0 The question then becomes for the Secretary on 4 whom should that risk fall, on the persons who you represent 5 or on the persons for whom the Agricultural Marketing Agreement Act has been adopted. б 7 А I will come back to my point that a too low make 8 allowance impacts the entire dairy industry negatively. It 9 is not an issue that too low make allowances are better for 10 producers because I do not believe that. 11 I believe a too low make allowance will result 12 over time in less available outlets or those outlets 13 becoming owned by cooperative associations who will pass 14 along the full costs of manufacturing in either a price 15 below the minimum or in a lower or negative operating 16 revenue over time. I do not believe that there is a balance 17 of risk here. 18 You continually refer, however, to over time. And 0 19 the question is the adjustment over time impacts immediately 20 the producer segment of the market, does it not? I don't agree with that statement because I think 21 А 22 you will be changing the minimum price levels, but you will 23 not be changing the competitive situation for milk. 24 Well, you will certainly be changing the Q 25 competitive situations with respect to certain plants

1 procuring milk and with respect to certain areas of the 2 country who will be differentially impacted, will they not? 3 А You are implying that plants are going to lower 4 the price they are now paying and expect to attract the same 5 supply of milk in even this month. And I don't agree with б that premise. I believe that if you suddenly -- let's say 7 they were only paying the minimum price now and that minimum 8 price is lowered by whatever action the Secretary takes and 9 they pay a minimum price afterwards. 10 You are not going to -- in a plant's mind or in a 11 firm's mind that is looking for a milk supply, they are not 12 only thinking about the milk supply today or this week or 13 this month. They are thinking about maintaining a long-14 term, competitive relationship in the market. 15 And they are going to use that factor in 16 determining what they pay for milk now. It is not just 17 exactly the conditions of what they have to pay now. It is 18 what they feel they have to pay over an extended period of 19 time. 20 Q Well --And I don't agree that there is suddenly going to 21 Α 22 be this loss of revenue to farmers immediately exactly equal 23 to the change in whatever minimum price is reported. And we believe that market adjustments will occur. 24

25 Q No one really knows what different plant operators

1 think over an immediate period or over a long period of 2 time. This becomes a matter of judgement for the Secretary 3 in fashioning a make allowance structure that over time he 4 believes will result in what the Marketing Agreement Act is 5 designed to accomplish, that is, to raise prices to producers. Isn't that essentially what we are all here for? б 7 А I think the '37 Act's purposes were to ensure an 8 adequate supply of fluid grade or Class I milk and to ensure 9 orderly marketing conditions in the interest of both 10 producers and consumers. 11 0 But the essential purpose is to ensure stability 12 of pricing among producers, is it not? 13 Well, anytime you have a condition where you have А 14 to reflect as is in the Act supply and demand conditions and 15 at the same time provide for orderly marketing, those two --16 there is a balance between those two at all times. 17 And we struggled with this when I was on the university study committee on the replacement for the BFP, 18 19 is, you know, the series, the replacement that would most 20 reflect immediately supply and demand conditions was not very stable. And the most stable alternative did not 21 22 reflect supply and demand conditions. 23 MR. BERDE: Thank you. I have nothing further. JUDGE HUNT: Thank you, Mr. Berde. Mr. McCluskey. 24 25 BY MR. McCLUSKEY:

1 Just in reference to that, on these premiums that Q 2 adjust, Bob, and this make allowance would happen to be a 3 little too high. And we have an adjustment of premiums that 4 we have established and in certain parts of the country 5 don't show up because of long-term contracts and proprietary. But they do show up in different ways. б 7 And my question to you is that they are going to 8 show because you have parts of the country that might have a 9 relationship of 40 percent Class I sales and 35 or 40 10 percent Class III sales. And the other 20 percent is kind 11 of split up between II and IV. 12 Is it -- in your opinion when you talk about these 13 premiums that come in and cover the fact that there is a 14 make allowance on Class III that is too high leaving too 15 much money to the cheese-maker as a profit, taking it away 16 from the producer, when you talk about these premiums. 17 In your mind, is it that it should come out of the 18 Class I milk to cover this because the premium actually 19 comes out of the Class I because, see, what happens is the 20 blend is so low that the producer cannot survive. 21 So we as marketing cooperatives, since we can't 22 get the proprietary to give us any money because of the 23 long-term contracts, we tend to go to the Class I bottler and say, you know, what, we are not making it here and we 24 25 actually steal from Peter to pay Paul in essence because we

can't get it out of the Class III to get this advantage of
 having a high make allowance.

And we actually get a premium, but we are getting it from a different class of milk. Is that part of your premium structure that you have been referring to?

б No. I am not implying that all of the over-order А premiums are going to come from any particular market. I am 7 implying that -- and I am not implying. I believe that the 8 9 over-order premiums that might be inherent in any plant that 10 has manufacturing costs lower than whatever the make 11 allowance is determined to be will flow through to farmers. 12 It will automatically flow through to farmers of 13 cheese -- of cooperatives that own cheese, butter and powder 14 plants, I mean, automatically. And in order to compete for 15 a supply of milk, other cheese plants are going to have to 16 pay. See, right now, everyone pays the blend price in the 17 marketplace.

18 If the cooperatives start paying more than that 19 because their costs of manufacturing are less than the make 20 allowance determined by the Secretary, there is going to be an incentive for shippers to come into the cooperative. So 21 22 other non-cooperatives are going to have to pay that 23 competitive over-order premium to attract a supply of milk. 24 Right. So for those cooperatives to be Q 25 competitive, what they do is end up going to someone that

didn't cause the problem. And the problem is over here in 1 2 the Class III make allowance that may be too high and not 3 enough money coming out of the Class III to the producer 4 because there is not -- we can't -- there are no premiums in 5 that area. So that cooperative does exactly what you do. б They have to pay a competitive price to other cooperatives. 7 So they go to other milk segments and get a premium to cover a problem elsewhere. Is that part of the premium? 8 9 I think this -- you know, because you are looking Α 10 at the relative price that those different segments are 11 paying. I would expect that, you know, if the cheese plants 12 suddenly start paying the blend price plus a premium related 13 to a make allowance difference with actual costs of 14 manufacturing on their Class III milk or if it is a butter 15 powder plant doing so on its Class IV milk, you are going to 16 see those increases reflected in the premiums that may 17 already be being paid by other class users in the market on 18 that portion of the milk used there because we are really 19 talking about the relative prices in the market. 20 If there is premiums being paid on Class I now and 21 that is a difference above the minimum prices to attract a 22 supply of milk and suddenly you start paying the minimum 23 price plus a premium for Class III milk in the market, you are paying less of a relative higher price if your premium 24

25 for the Class I plant stays the same.

1 You are going to be increasing your premium by an 2 equal amount. It is the relative price difference between 3 that Class I and that Class II plant that attracts that milk 4 supply on a regular basis. 5 MR. McCLUSKEY: Thank you. JUDGE HUNT: Mr. Beshore. 6 BY MR. BESHORE: 7 8 Just a couple of follow-up final questions, Dr. Q 9 Yonkers. The three-cent price difference between barrels 10 and blocks is presently in the orders -- represents a 11 historical difference between the prices of those products 12 over a long period of years, does it not? 13 Adjusted to different moisture contents, yes. А 14 Q Now, isn't the -- now, the NASS --15 Α The barrel price is adjusted to 39 percent 16 moisture. The 40-pound block price is not. 17 Now, I thought the adjustment was made in the NASS Q prices before the three-cent differential was applied. 18 19 Yes, yes. You are adjusting to 39 percent А 20 moisture. You are talking about two cheese products which have a different price per pound of solids in them. And 21 22 that difference is not three cents. 23 Okay. My question really is assuming that the Q three cents represents historical differences in the price 24 25 per pound of blocks and barrels over a period of years using

whatever price reference series we want. Just assume that
 with me for a moment. Okay. Using -- whether you use the
 Green Bay Cheese Exchange, you know, the National Cheese
 Exchange or assembly point series or whatever.

5 If you look at -- assume with me that if you look 6 at them over a number of years that the difference -- three 7 cents is a representative difference between blocks and 8 barrel prices and that that differential has been continued 9 in the present program. Why should it be reduced to one 10 cent now?

11 A Is your -- in your question, are you assuming that 12 that three cents is reflective of those cheeses at identical 13 moisture contents? So the price per pound of dry matter 14 truly differs by an equivalent of three cents per pound of 15 cheese. Is that --

16 Q I am assuming that that is the difference in the 17 quoted price series that we have seen.

18 Okay. But the quoted price series adjusts barrels А to 39 percent moisture. And it does not do so on 40-pound 19 20 blocks. Forty-pound blocks if they were all made at 39 percent moisture, your quality control is not that 21 22 identical. You would be making some cheese that is not 23 cheese because the maximum legal limit is 39 percent. 24 The average on 40-pound blocks in the marketplace 25 I have been told is closer to 38 percent. And I believe you

1 will have some testimony later from others who will testify 2 that that 40-pound block price is much closer -- excuse me, 3 40-pound block moisture is 38 percent. So per pound of dry 4 matter, that three-cent difference is much less per pound of 5 dry matter in the cheese because of that moisture б adjustment. 7 Q So what is the difference in the cost of -- for 8 the manufacturing costs in barrels and blocks? 9 Well, in my example, what I went through is А 10 looking at the --11 0 I didn't see anything about manufacturing costs 12 with respect to barrels and blocks in your example. 13 I don't have any data on the difference in А 14 manufacturing costs between the two. 15 0 Okay. So you don't know what the difference --16 okay. 17 А But I believe some others may be testifying later 18 on that fact, yes. Okay. How many of the ten firms in your study 19 0 20 will we be hearing from in the subsequent testimony? You have deferred to their information a number of times. How 21 22 many firms were you referring to? 23 А At least two will be testifying and perhaps more. Now, one final question, you have commented 24 Q 25 numerous times in your testimony that the cheese

1 manufacturers as I understood your testimony have no ability 2 to control the price they sell their cheese for. 3 А Well, that is determined in the market. And if 4 you look at the cheese manufacturers, they are only one 5 segment of the market, the supply side of the market. б Okay. So what I said was correct, that in your --0 7 А That is correct. -- in your view, they have no ability. Okay. Do 8 0 9 you know what the range is of NASS prices for that uniform 10 product that comes out to the weighted average price? 11 А No, I don't. And I don't believe NASS publishes 12 that on a regular basis. 13 Do you have any -- if what -- if the basis for --0 14 assuming -- there is a range, is there not, in your --15 А I would assume that everyone is reporting the 16 identical price. That would be a particularly interesting 17 circumstance. 18 Well, how is it that some firms can obtain a 0 19 higher price and other firms a lower price for that 20 identical product? Is that purely a function of geography? Is it purely a function of -- what is it a function of? 21 I think it relates to -- oh, God, there is a 22 А 23 number of market factors that impact that price at any one point in time. 24

25 Q None of which --

1 A Certainly location value is one. In the case of 2 block cheese, moisture content could be different. And that 3 could be reflected in the prices that is paid for that 4 depending on the contract.

5 Q Well, in that case, the plant could adjust the 6 moisture of their cheese and adjust the price they get, 7 could it not?

But not unless -- but they are not adjusting the 8 А 9 price -- necessarily adjusting the price per pound of dry 10 matter in the cheese which is what we have available to pay 11 farmers. It is based on the dry matter, the protein and the 12 butterfat. Not on the moisture that is in the cheese. You 13 could have different prices for cheese at different moisture 14 contents that would result in an identical price if they are 15 adjusted to the same moisture content.

16 Q Okay. What other immutable, uncontrollable market 17 factors are there which dictate the price that the plants 18 are getting for their product?

A Local supply and demand for cheese at that particular point in time. You could have things well beyond the plant's control. It could be an unannounced marketing plan for fast food restaurants that is going to increase the demand for cheese.

You could have a -- for any given time, if there happened to be a week where if for some reason, there was a

1 fair amount of forward-contracted sales and suddenly there 2 was an increased demand, there is not as much that hasn't 3 already been contracted. It would have a significant impact on that amount above the amount that is forward-contracted. 4 5 I mean, there is a lot of factors that go on in the market -б 7 None of which --0 A -- all related to competition for the available 8 9 supply of cheese. 10 0 Okay. And none of those factors -- the individual 11 plants have no control over any of those factors. That is 12 your testimony, correct? 13 I don't believe they do. А Okay. Can you tell me then what it is that their 14 0 15 marketing expense is used for if the product is uniform and 16 the price is defined by all other -- by factors over which 17 they have no control? 18 А That doesn't mean they have a customer. That 19 doesn't mean the customers are coming to their plant dock 20 saying, hey, can I go back and pick up, you know, a couple of loads of 40-pound blocks. 21 22 0 The customers are out there as defined by supply 23 and demand. 24 Yes. But that doesn't mean that you have А 25 identified all of them. It doesn't mean that you have

1 identified the best customer to sell to for your product at 2 that particular point in time and found the best price that 3 is available for that particular product at that point in 4 time. 5 Q So you can use some effort --Nor have you collected the money --6 А 7 No, let me ask my question. So you can use some Q effort to obtain -- no, no. He interrupted my question. 8 9 UNIDENTIFIED MALE SPEAKER: No. He was adding to 10 his answer to your previous question --11 JUDGE HUNT: Just a second. Have you finished 12 your answer? 13 THE WITNESS: I have a few more points on --14 JUDGE HUNT: All right. Wait then, Mr. Beshore. 15 THE WITNESS: -- on the potential marketing costs. 16 You haven't received payment yet. You haven't done 17 invoicing for that payment all of which are costs associated 18 with a marketing function. Nor have you covered the costs 19 associated with the fact that you have already made the 20 product and paid for the milk. 21 But you may not be paid at the time you are sold 22 it. There may be conditions related to that. So there are 23 marketing costs other than just having someone physically sell the product for you associated with that. 24

25 BY MR. BESHORE:
1 2 Q But I thought you said that one of those functions might be to get the best price that is out there for the

3 product.

4 A Sure, sure.

5 MR. BESHORE: Okay. Thank you.

6 JUDGE HUNT: Mr. Rosenbaum.

7 BY MR. ROSENBAUM:

Q I want to make sure on the last point. I will try not to generate any more questions through my own questions. Dr. Yonkers, just to make clear what the official position is of IDFA on make allowances, let me see if I have it right. You should use the best data to determine what the make allowance is and then err on the side of a make allowance for purposes -- excuse me.

Let me start that again. You should determine what the actual costs of manufacturing are on a weighted average basis and then err on the side of too high in determining the make allowance in the regulations.

19 A Our position is that USDA should not set a make 20 allowance lower than that weighted average that we have 21 established, yes.

Q Okay. And as you state on page 33, IDFA would support the continuation of the current make allowance of 17.02 which is slightly higher than the weighted average make allowance that comes out of the California survey and 1 the NCI survey.

2 А That is correct. 3 0 All right. Now, let me talk a minute about the 4 NCI survey. First of all, were cooperative-owned cheese 5 plants part of that survey? Yes, they were. б А 7 This is not limited to proprietaries, correct? Q No, it is not. 8 А 9 All right. And, indeed, there were a number of --Q 10 we are going to get the list at some point later. 11 А Of firms, yes. But just to make clear, there are a number of 12 0 13 cooperatives who participated in the NCI survey. 14 А I know of some that participated and I need to see 15 the full list. Yes, yes. 16 And there are cooperative-owned cheese plants that 0 17 are members of NCI, correct? 18 А That is correct. All right. Now, there were some questions about 19 0 20 what incentives people might have had in reporting as part of the NCI survey program. But the bottom line is the NCI 21 22 survey actually came in with a lower make allowance than the 23 California Department of Food and Agriculture, correct? 24 Weighted average price, that is correct. А 25 0 We are about a quarter of a cent lower, correct?

1 A That is correct.

2	Q Which works against us so to speak in the sense
3	that we are trying to make sure the make allowance is not
4	too low. And yet our number is actually lower than
5	California's correct? Is that right?
6	A Yes.
7	Q All right. Now, let's move on to the problems in
8	the Rural Business Cooperative survey. I am not going to
9	talk about the things that are left out of that survey.
10	That has been discussed at great length. I want to focus
11	solely upon the fact that as shown by Exhibit 9, the data
12	presented here shows for cheese a higher weighted average
13	than simple average.
14	A That is correct.
15	Q Okay. Now, let's just march through this so it is
16	clear on the record what the implications are on that.
17	Let's assume that you had a survey of ten plants. And it is
18	a simple average survey of cost. What you do is you add the
19	cost of each plant and you divide by 12 and that is your
20	simple average, correct?
21	A That is correct.
22	Q If there are 12 plants in the survey, then the
23	denominator is 12, correct?
24	A That is correct.
25	Q And that doesn't matter whether you are looking at

1 a cheese plant or making steel or automobiles. That is just 2 how you determine a simple average, correct? 3 А That is correct. Now, let us assume it is a weighted average. If 4 Q 5 it is a weighted average, what you do is you determine the б cost for each plant and then you weight the cost of any 7 individual plant by the percentage that that plant 8 represents of the total of all the plants combined, correct? 9 А Their volume. That is correct. 10 Q Okay. So that a plant that has a higher than 11 average volume plays a bigger role in determining the 12 weighted average, correct? 13 А That is correct. 14 Q All right. Now, in a circumstance where the 15 simple average is higher than the weighted average, that 16 means the bigger plants have lower costs. Correct? 17 А That is correct. 18 And that, once again, doesn't matter whether you Q are talking about cheese, automobiles --19 20 А Correct. -- chickens. That is just how the math works, 21 0 22 correct? 23 А That is correct. 24 All right. And that, in fact, is more or less Q 25 what you would anticipate in most industries, correct, the

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bigger plants are more efficient and, therefore, have a

- 2 lower cost. Correct?
- 3 A That is correct.

4 Q Now, if on the other hand the simple average is 5 lower than the weighted average, that means the larger 6 plants have a higher cost, correct?

- 7 A That is correct.

8 Q And that is just a matter of the math, right?

- 9 A That is correct.
- 10 Q It is inescapable, correct?
- 11 A That is correct.

12 Q That has got to be the case. Anytime whether you 13 are looking at cheese, eggs, automobiles, whatever, anytime 14 you get a simple average that is lower than the weighted 15 average, the bigger plants have higher costs than the lower 16 costs.

17 A On average, that is correct.

18 Q And that is counter-intuitive, to use the word I 19 used with Dr. Ling --

20 A Yes.

21 Q -- for that to be the case.

22 A That's correct.

23 Q And yet nonetheless, that is what the Rural24 Business Cooperative survey asserts to be the case.

25 A That is what Dr. Ling reported in his survey.

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For cheese only though, correct?

0 2 А That is true. 3 0 It is just the opposite for butter and for --And nonfat dry milk, that's correct. 4 А 5 0 -- and for nonfat dry milk. And what Dr. Ling 6 observed was true for the cheese plants which you define as 7 counter-intuitive is not what was found in the California 8 survey, correct? 9 А That is correct, for any of the products. That is 10 correct. 11 0 Because in the California survey, as you would 12 have expected, the weighted average cost of manufacturing 13 cheese is lower in the bigger plants, correct? 14 А That is correct. Which results in for California a lower weighted 15 0 16 average than a simple average. 17 А That is correct. 18 MR. ROSENBAUM: That's all I have. JUDGE HUNT: Mr. Coughlin. 19 BY MR. COUGHLIN: 20 I hate to go back to this weighted average. But 21 0 22 you agreed with me earlier that perhaps some of the 23 cooperative plants could be balancing plants and would have 24 a higher per unit cost? 25 А Now, I am trying -- I wasn't here for all of Dr.

Ling's testimony. But I would agree that that is a 1 2 possibility. I don't -- I seem to recall that the 3 cooperatives try to select plants so that they are not 4 looking at the balancing function. They are actually 5 getting those that are in business to make those products б all year long. But I would agree that if that's -- if your 7 statement is correct that there are some balancing plants in 8 that survey, that that could result in that. 9 I happen to have seen the individual -- seen the Q 10 survey results. And there is a -- did Dr. Ling present 11 testimony with respect to the proportion of capacity in 12 these plants that was utilized? 13 Yes, I think he did. А 14 0 And as I -- that testimony would indicate that 15 there was a wide variation in the proportion of capacity 16 that was used. 17 А I'm sorry. Ask that question again. 18 I think that his testimony indicated that there Q 19 was a wide variation in the proportion of the plant capacity 20 that was used. I wasn't here for all of his testimony. 21 А 22 Q Okay. If you will agree with me for a minute that 23 that was what his testimony was, could it be that the larger 24 plants were using less of their capacity and consequently 25 spreading fixed costs over a smaller amount of volume? In

1 other words, it would result in -- those fixed costs within 2 the plant would be spread over a number, if you will, that 3 didn't reflect the full utilization of the plant? 4 А Yes. 5 0 And could that be a reason why the difference between the weighted average and the simple average? б 7 Well, but it is weighted by the volume they А 8 produce, not by the capacity they had to reduce it. So if 9 you are arguing that those plants that process larger 10 volumes were by far the largest capacity plants --11 Q But may have had the lowest utilization. 12 -- of that plant capacity, but still had far more А 13 volume than the other plants. I mean, that's --14 0 They had more volume. But they were spreading 15 their fixed costs --16 А And in addition, I would argue that those plants 17 don't belong in what we are trying to do here which is set a 18 make allowance that is really based on cheddar cheese plants 19 that are operating, not cheddar cheese plants that are 20 balancing in the market. If you want to err on the side of being higher, 21 0 22 why don't those plants belong? 23 А You are not comparing apples to apples. You are, vou know --24 25 Q But those plants are there.

1 A Those plants are serving an additional function in 2 the market.

3 Q But you don't want to cover their costs is what 4 you just said.

5 A I don't necessarily think they should be included 6 in the survey for determining information because --

7 MR. COUGHLIN: I will stop there.

8 THE WITNESS: Okay. Thank you.

9 JUDGE HUNT: Mr. Marshall.

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10 BY MR. MARSHALL:
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11 Q A very, very quick question to clarify some 12 confusion that I think crept in in your dialogue with Mr. 13 Rosenbaum. In attempting to summarize what your position 14 is, Mr. Rosenbaum's question and your answer implied that 15 the numbers, however interpreted, ought to be used subject 16 then to additional consideration of erring on the side of 17 lower order price and a higher make allowance.

18 A We testified that there is -- okay.

19 Q But I think in other earlier testimony, you
20 indicated there were a number of factors. And, indeed, I
21 refer you specifically to page 15 of your testimony in which
22 you make an argument for looking at price alignment with
23 California. And I would simply ask this question. Would
24 one of the policy considerations that USDA ought to consider
25 include price alignment with California?

1 A Yes.

2	MR. COUGHLIN: Thank you.
3	JUDGE HUNT: Mr. Olson?
4	BY MR. OLSON:
5	Q Just one quick question. You have inferred that
6	your weighted average was lower than what the simple average
7	is. But I didn't see anything in the document that said
8	what the simple average is. Do you have that data?
9	A Yes, I think we did have a simple average
10	reported. Would you like
11	Q Okay. It's not in the document as far as I can
12	tell.
13	A No, it's not. We didn't we are not advocating
14	the use of it and we don't believe you should be considering
15	simple averages. We believe it ought to be weighted by the
16	volume. A simple average, you know, could only represent
17	ten percent of the volume. I mean, you could have by not
18	using that weighting, you could have 90 percent of the
19	volume represented that could have higher costs. So it is
20	our position that that should not be used for consideration
21	in setting a make allowance.
22	Q I guess we just don't know from what has been
23	presented what that was and have been inferring that there
24	is a problem with the Cooperative Services because of it.
25	And I'm just curious. You have referred to the weighted

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average which is fine, but we don't know what the simple

2 average was. 3 А Okay. JUDGE HUNT: All right. Thank you, Dr. Yonkers. 4 5 Mr. Rosenbaum, I think you said you were going to have a couple of members testify? б 7 MR. ROSENBAUM: At some point during the hearing, yes. I am not suggesting --8 9 JUDGE HUNT: Do you want to follow on Dr. Yonkers 10 with the --MR. ROSENBAUM: I don't think the --11 12 JUDGE HUNT: -- logical follow-up? 13 MR. ROSENBAUM: I don't think that had been the 14 plan. 15 JUDGE HUNT: That had not been the plant? MR. ROSENBAUM: No, I think -- well, I know there 16 17 were some people who needed to get out -- done today. And I 18 don't think those are people --JUDGE HUNT: Well, there is Dr. -- or Mr. 19

20 Tewksbury has to be out today. I will take him as the next 21 witness. Mr. Tewksbury, are you here? 22 MR. TEWKSBURY: I am here. 23 JUDGE HUNT: All right. Let's just take a break 24 for lunch. And we will get you the first thing after lunch.

25 And, yes, excuse me. Hold on.

MS. BRENNER: You've got several dairy farmers in the back that want to talk to you about testifying today, too. JUDGE HUNT: All right. Yes. If you would come down to me during -- just as soon as we break for lunch and we will take you. Be back here at 12:45. (Whereupon, the hearing was recessed at 11:35 a.m., the reconvene at 12:50 p.m., this same day.) // //

1 AFTERNOON SESSION 2 (12:50 p.m.) 3 JUDGE HUNT: Good afternoon, sir. 4 Whereupon, ARDEN TEWKSBURY 5 б having been first duly sworn, was called as a 7 witness herein, was examined and testified as follows: 8 JUDGE HUNT: All right. Would you state and spell 9 your name, Mr. Tewksbury? THE WITNESS: Okay. My name is Arden Tewksbury. 10 11 It is A-R-D-E-N T-E-W-K-S-B-U-R-Y. And before I start, Mr. 12 Chairman, I want to acknowledge that I have been going to 13 these hearings I think for 36 years now. And I don't see 14 too much difference in them than what I saw 36 years ago. 15 We are still arguing over how we can get some money for our 16 dairy farmers and cover the costs of our processors' 17 operations. And they both are in our book very important. 18 My name is Arden Tewksbury. I own and operate a dairy farm in Mishopin Township, Wyoming County, state of 19 20 Pennsylvania. I have been operating my present farm since October 1957. Along with my main farm, I have a second farm 21 22 I use to grow replacements for my dairy cows. In addition, 23 I lease my neighbor's farm.

In addition to operating my dairy farm, I am the manager of the Progressive Agricultural Organization (Pro-

Ag), as well as being associated with the Northern Tier of
 Milk Cooperative. These organizations are located at RD-2,
 Box 165, Mishopin, Pennsylvania 18630.

In addition to Pro-Ag and Northern Tier, my appearance today is being made on behalf of the following organizations: National Family Farm Coalition located at 1600 Maryland Avenue, Washington, D.C.; the Dairy Action Coalition Headquartered in Westfield, Pennsylvania; and the American Raw Milk Producers Pricing Association headquartered in Watland Key, Wisconsin.

11 Mr. Chairman, contained in the hearing notice of 12 this hearing is a regulatory flexibility analysis, RFA. The 13 RFA indicates that 92.5 percent of the dairy farmers that 14 market their milk through the Federal Order System are 15 identified as small business.

Without any reservation, the above dairy farmers and other dairy farmers are suffering irreparable damage as a result of the present pricing formulas. As everyone should know, dairy farmers are compelled to produce and sell their milk for the same prices as they received in the late 1970s. It is unthinkable that the dilemma facing our dairy farmers be permitted to continue.

23 Therefore, the organizations I represent here
24 today are urging the United States Department of
25 Agriculture, or USDA, to completely restructure the pricing

mechanism to establish the Class III and Class IV prices.
 Our two main important reconsiderations today are, number
 one, use the national total economic costs on our dairy
 farms to establish a Class III price.

5 And two is eliminate the make allowance. And what 6 we mean by that, eliminate it off of the backs of our dairy 7 farmers and share some of this out of the marketplace 8 somehow. We just don't feel that the total cost of 9 converting milk into manufactured products should be borne 10 by our dairy farmers.

11 And I have a history, a lot of years of selling 12 milk to manufacturing plants like the Prino and many other 13 people. And I realize the importance of our processes. I 14 realize the importance of our cheese plants across the 15 United States and what a significant part they play in our 16 dairy industry. But we do think we should be finding some 17 other way to help make up for some of this make allowance 18 and still deducting that all off from our dairy farmers' 19 prices.

20 Cost of production. For many years, several farm 21 organizations have been attempting to convince USDA and the 22 United States Congress to implement a milk pricing mechanism 23 that would use the dairy farmers' actual costs as a means of 24 pricing milk. However, to this day, the dairy farmers' 25 costs are not really part of the pricing formula. Under the 1 2

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original parody concept, dairy farmers did have an opportunity to parallel themselves with the United States economy.

4 However, since the spring of 1981 when Congress 5 voted not to adjust the support price on manufactured milk, б we have witnessed extreme volatility in the prices received 7 by dairy farmers. Since 1981, we have witnessed severe 8 reductions in the manufactured milk price and this has 9 caused several peaks and valleys in the milk price received 10 by dairy farmers which has led to a severe reduction of the 11 number of dairy farmers across the United States.

12 These reductions in dairy farmers have played 13 undue havoc with the personal lives of many of these 14 farmers. In addition to lowering the support price, the 15 dairy farmers were victimized by extreme assessments to 16 maintain some similarity of a dairy program.

17 In our opinion, it was an extreme mistake to continue to lower the support price of manufactured milk 18 19 without instituting the farmers' cost of production into the 20 milk pricing formula. The organizations I represent today do not stand alone in urging the dairy farmers' cost of 21 22 production to be instituted into the pricing formula. 23 Section 739 of the Agriculture Act reads whenever the Secretary of Agriculture announces the basic formula 24

price of milk for the purpose of Federal Milk Marketing

1 Orders issued under sections AC of the Agriculture 2 Adjustment Act, 7 USC 608(C), reenacted with amendments by 3 the Agriculture Marketing Agreement Act of 1937, the 4 Secretary shall include the announcement an estimate stated 5 on a per hundred-weight basis of the costs incurred by milk б producers including transportation and marketing costs to 7 produce milk in the different regions of the United States. On April 17th, 1997, Senator Spector introduced F. 8 9 604 which called for the Agriculture Market Transition Act to be amended to require the Secretary of Agriculture to use 10 11 the price of feed grains and other cash expenses as factors 12 that are used to determine the basic formula price for milk 13 and any other milk regulated by the Secretary. 14 On September 9th, 1997, 16 United States Senators 15 introduced S Resolution 119 calling for the Secretary to 16 establish a temporary emergency minimum milk price that is 17 equitable to all producers nationwide. Again, on February 18 8th, 2000, Senator Spector called on the United States 19 Senate to take appropriate action to rectify the dilemma 20 facing dairy farmers nationwide. The fact that the United States Congress has not 21 22 directly intervened in this terrible price disparity 23 mandates that appropriate action should be taken in this hearing to correct the dairy farmers' inadequate prices. I 24 25 was involved in helping to establish the pricing formula

that was part of Congressman Bernie Sanders Dairy Nutrition
 and Conservation Act of 1995.

3 In the proposed Sanders Act, we developed the 4 pricing formula based on our dairy farmers' average cost of 5 production for pricing all classes of milk. However, б because of the scope of this hearing, it will be impossible 7 for us to introduce the same formula as it was in the 8 proposed Sanders bill. 9 And actually, in the Sanders bill, if we were 10 doing the same thing here today, I would restructure my 11 entire pricing formula here. But as long as we are dealing 12 only with Class III and Class IV milk, it makes it very

13 difficult to put in an adequate cost of production formula 14 as we would like to do.

15 However, the United States Department of 16 Agriculture Economic Research Service publishes the regional 17 milk production cost on a monthly basis. For this hearing, 18 I am going to make reference to the USDA's cost of 19 production figures for February 2000. And these are the 20 total economic costs for the six regions across the United States. And this is the cash cost, return on investment for 21 22 dairy farmers. And this is the figure they come up with. 23 And this is in the northeast, \$19.40 per hundredweight; in the southeast, \$18.05 per hundred-weight; upper 24 25 midwest, \$17.93 per hundred-weight; Corn Belt, \$19.96 per

1 hundred-weight; southern Plains \$15.84 per hundred-weight; 2 and the Pacific region, \$11.06 per hundred-weight. 3 The average cost of these regions would be \$17.05 4 per hundred-weight. For the purpose of establishing the 5 Class III price for milk, we took the Class I price б differentials and all 11 Federal Orders using USDA's 7 reference point in each order and obtained the value of the 8 average differential for all orders. 9 According to our figures, the average differential 10 would be \$2.58 per hundred-weight. We then subtracted a 11 \$2.58 pre hundred-weight from the \$17.05 which represents a 12 total economic cost across the country. This would 13 establish a \$14.47 per hundred-weight value of Class III 14 milk in all Federal Orders. 15 And this is what we did when we said we backed 16 into the formula because the differential was already 17 established at Class I price. And we had to come up with a methodology to come back and get the value of Class III milk 18 19 somewhere near where it would be under the regular pricing 20 formula. This would establish the \$14.47 per hundred-weight value of Class III milk in all Federal Orders. 21 22 This hearing probably does not allow for the 23 grouping of classes of milk. So we would recommend the same methodology be used to determine the value of milk used in 24 25 Class IV as we used in determining the value of Class III

milk. I guess, of course, the Class II milk price would
 have to be determined the same way as it is because that is
 not part of the hearing.

The Class I price would be determined by using the present method of adding the existing differentials onto the Class III or Class IV price. In our proposal, the Class III and Class IV price would be the one and the same price.

8 Consequently, in Federal Order number 1, the Class 9 I price in Boston, Massachusetts would be determined by 10 adding the \$14.40 per hundred-weight Class III price or 11 Class IV with the existing Class I differential of \$3.25 per 12 hundred-weight which would establish the Class I price at 13 \$17.72 per hundred-weight.

14 The same methodology would be used in the other 15 ten Federal Milk Marketing Orders. If our pricing formula 16 would be adopted for implementation for January 1st, 2001, 17 we would urge the Secretary to use a national average total 18 economic cost for the year 2000 as determined by the USDA as 19 the basis for establishing the Class III and Class IV price. 20 Thereafter, we would recommend a semi-annual adjustment to these prices. That would be the prices that 21 22 our formula would establish for the dairy farmers, 23 processors and the consumers, and could take much of the

24 volatility out of our dairy farmers' prices.

25 We strongly urge that the term of make allowance

should not be used in connection with dairy farmers' prices.
And we think it is unthinkable that these type of costs be
levied on our dairy farmers. And that is where I want to
amend what we are saying. We are willing to go along and
support the idea of adding this make allowance on top of
what our farmers' fair share is out of the marketplace as
determined by our formula.

8 The dairy farmers have hauling costs, stop charges 9 and advertising costs already charged to them. The dairy 10 farmers pay for the total cost of everything delivered to 11 them and for the products that leave the farm. It is time 12 due consideration be given to our dairy farmers and 13 eliminate any price reduction to our farmers by hidden 14 elements like a make allowance in our milk pricing formula. 15 Mr. Chairman, the majority of dairy farmers across

16 the United States are in dire straits with many of them 17 pondering what their future holds for them. It is a sad 18 thing to visit dairy farmers and realize the broken homes, 19 the suicides and threats of suicides that exist out on our 20 farms. It is time we return some form of prosperity to our 21 family dairy farmers as well as our rural communities.

I firmly believe our proposals to be the start of overcoming many of the adversities on our dairy farmers and I thank you for the opportunity to be here today.

25 JUDGE HUNT: Any questions of Mr. Tewksbury?

1 Thank you very much, sir.

2	THE WITNESS: Very good.
3	JUDGE HUNT: And Mr. Randy Jasper. Incidently,
4	for this afternoon, we have testifying Mr. Jasper, Ms.
5	Bonita Davis, Mr. Cy Cochran, Mr. Hank Rosenbalm and Dr.
б	Barbano. They are all under time constraints. And that is
7	the reason why are taking that order.
8	Tomorrow morning, for similar reasons we have
9	slated to testify people who have to leave tomorrow. Mr.
10	Content and Mr. Pacheko. Is that how you pronounce that?
11	And then Mr. English has two witnesses and Mr. Olson has
12	some witnesses. So that is the order right now.
13	Whereupon,
14	RANDY JASPER
14 15	RANDY JASPER having been first duly sworn, was called as a
14 15 16	RANDY JASPER having been first duly sworn, was called as a witness herein, was examined and testified as follows:
14 15 16 17	RANDY JASPER having been first duly sworn, was called as a witness herein, was examined and testified as follows: JUDGE HUNT: And would you state and spell your
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14 15 16 17 18 19	RANDY JASPER having been first duly sworn, was called as a witness herein, was examined and testified as follows: JUDGE HUNT: And would you state and spell your name, sir? THE WITNESS: Randy Jasper, R-A-N-D-Y J-A-S-P-E-R.
14 15 16 17 18 19 20	RANDY JASPER having been first duly sworn, was called as a witness herein, was examined and testified as follows: JUDGE HUNT: And would you state and spell your name, sir? THE WITNESS: Randy Jasper, R-A-N-D-Y J-A-S-P-E-R. I am a dairy farmer from Moscody, Wisconsin. My son and I
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14 15 16 17 18 19 20 21 22 23	RANDY JASPER having been first duly sworn, was called as a witness herein, was examined and testified as follows: JUDGE HUNT: And would you state and spell your name, sir? THE WITNESS: Randy Jasper, R-A-N-D-Y J-A-S-P-E-R. I am a dairy farmer from Moscody, Wisconsin. My son and I operate a 100-cow dairy farm. I have been actively involved in dairy farming all my life, pretty much on my own for the last 35 years. I also represent ARMPA. I am a national
14 15 16 17 18 19 20 21 22 23 23 24	RANDY JASPERhaving been first duly sworn, was called as awitness herein, was examined and testified as follows:JUDGE HUNT: And would you state and spell yourname, sir?THE WITNESS: Randy Jasper, R-A-N-D-Y J-A-S-P-E-R.I am a dairy farmer from Moscody, Wisconsin. My son and Ioperate a 100-cow dairy farm. I have been actively involvedin dairy farming all my life, pretty much on my own for thelast 35 years. I also represent ARMPA. I am a nationalboard member of ARMPA. I am also very active with Family

milk marketing co-op in Wisconsin which presently has about
 60 producers.

I don't come in with a real plan. I didn't know I was going to be at this meeting, number one. But any of the groups I represent could very easily supply Arden Tewksbury's ideas. They would be a very good thing.

7 I mainly come up here today to tell you what is 8 going on out there. You people basically are sitting here 9 trying to figure out how much you can take out of a farmer's 10 check to guarantee yourself a cost of production. Now, I 11 have nothing wrong with being guaranteed a cost of 12 production. But that is what you are asking for.

And you are asking farmers that are already losing out six per day in the state of Wisconsin, we are losing pretty much per day. We have for several years. And I am told that is not any more than it was last year. That is not so because it is a larger percentage than it was last year.

So you are asking farmers that are already in deep financial trouble to pay another 17 cents or 20 cents or whatever it was. I don't get this. Last year we received around \$17.00 a hundred-weight for our milk in Wisconsin around my immediate farm. And my -- what I have seen of consumer prices, the fluid milk has dropped off a little. But I haven't seen cheese drop off to speak of. So where in

1 the world is that money at?

2 All of a sudden, now you need 20 cents more a 3 hundred to operate. Where did that money go that the 4 consumer is paying \$16.00 to \$17.00 a hundred for it, and we 5 are receiving \$10.50. Where in the world did that go? It was there last year. б 7 So as far as the cost of production to a plant, I 8 have no problem with the cost of production to a plant or 9 make allowance. But you've got to give us the cost of 10 production or how in the world do you expect us to pay our 11 bills and give you a cost of production. It just doesn't 12 make any sense. 13 For instance, what is happening in my area, my son

14 received a beginning farmer loan for FHA it used to be, not 15 for lack of knowing what it is. It is still FHA to me. It 16 is a government agency. There was 11 beginning farmer loans 17 given out last year in Russell and Vernon County, both 18 fairly large dairy counties. Out of those 11, how many do 19 you think are still left today? One. And that was in the 20 calendar year of '99.

21 So if you give beginning farmer loans out, you 22 want to make dairying better, none of that is any good if 23 you can't show that young person that he can make a living. 24 The only reason there is one left, he is my son and he is 25 operating on my equity. And that can't go on indefinitely. 1

I mean, it just will not work.

2 I just -- I didn't know quite want to hear. Like 3 I said, we come to this meeting thinking it wasn't --4 yesterday actually we worked with the black farmers. They 5 had a rally in Wisconsin -- or in Washington I mean. So we б went there to support them. So we ended up down here. 7 But I've sat in the back of the room for a few minutes here. And you are lucky I haven't had a changed 8 9 life because I would have taken this meeting apart. There 10 is absolutely no reason for what is going on here or any 11 place in the dairy industry. This \$10.50 milk is the most 12 disgusting thing I have ever seen in my life. And people 13 sat here and part of the cost of your production, putting 14 you up in this fancy hotel the days you are here? Is that part of the cost of this production that you expect the 15 16 dairy farmers? 17 On my farm we lose and my son's farm we lose

\$4,000.00 a month right now. And yet you ask me to pay another 20 cents for cost to guarantee you a cost of production at your milk plant. Where in the world do you people think that comes from?

We cannot operate. I can be efficient no longer. Everything I own is worn out, junk. It needs to be replaced. And at \$10.50, there ain't no way that we are going to stay in business. And I talked to -- through

ARMPA, I have talked to a lot of farmers on the east coast.
 And they are no better off than we are.

3 I have talked to farmers in Minnesota, Iowa, 4 Michigan, down south in Alabama. And they are all in the 5 same boat. So unless something is done with the cost of raw 6 product, the people that are here wanting a guaranteed cost 7 of production to their milk plants are not going to be here 8 very darn long because it is not going to happen. Thank 9 you. 10 JUDGE HUNT: Any questions of Mr. Jasper? Thank

11 you very much, sir. Ms. Davis.

12 Whereupon,

13

BONITA DAVIS

14 having been first duly sworn, was called as a

15 witness herein, was examined and testified as follows:

16 JUDGE HUNT: Thank you. Would you state and spell 17 your name, please?

18 THE WITNESS: Bonita Davis, B-O-N-I-T-A D-A-V-I-S. 19 I am from Spartensburg, Pennsylvania. My husband, Jim, and 20 I are dairy producers in the northeast corner of the state 21 near Lake Erie. We milk 50 cows, raise our own replacement 22 heifers on an operation of 250 acres.

Our oldest son, Josh, is 19 years old and would like to continue the dairy tradition for a fourth generation. Today I would like to address the matter of factoring cash cost of production into the Class III pricing
 formula.

3 First, the issue of fair consideration in the 4 industry comes to mind. The processors' cost associated 5 with converting raw milk into manufactured products are б factored into the minimum pricing formula by USDA. These 7 cost considerations of processing are, as you know, called make allowances. The processors do not have identical costs 8 9 of processing. However, a survey was conducted and average 10 cost was determined and a make allowance was put in place.

Different processors benefit in various degrees according to their efficiencies. Nonetheless, there is some benefit to be accessed by all. In the same way, a survey could readily be taken in different regions of the country. And, indeed, many of these analyses have already been recorded to determine average cash costs of production for dairy farmers.

18 This survey should be done by region because one 19 of the biggest factors precipitating a change in expenses is 20 weather conditions. Conditions in nature vary greatly from year to year and region to region. They are completely out 21 22 of a farmer's control and have a substantial influence 23 either positively or negatively on the expenses of an operation, especially through feed costs and quality. 24 25 As the processors' make allowance considers a

portion of their expenses, the dairy producers cash costs should receive the same consideration as a factor in the pricing formula. Some would argue that this surveying estimating average and record-keeping would be too costly and require additional staffing.

б However, these estimates are already being 7 conducted and the information routinely disseminated by reputable organizations. Agricultural colleges conduct and 8 9 publish these surveys. Also, for example, in the February 10 25th, 2000 issue of "Hord's Dairymen", USDA's Economic 11 Research Service's statistics are published in chart form. 12 The average total cash expenses for all the United 13 States was \$13.47 per hundred-weight. However, seven 14 regions' individual cash and total economic costs were 15 computed. I believe the information needed is not some 16 abstract, non-documentable theory, but can indeed be 17 calculated and an average cash cost of production for each 18 region established for the purpose of being factored into 19 the pricing formula.

Accessibility of the facts concerning production costs and industry precedent in considering processors' costs are two reasons for my testimony. Nevertheless, I believe the foundation on which to establish this pricing was laid in 1937 through the Agricultural Marketing Agreement Act.

By failing to take into account economic conditions such as the price and supply of feeds when calculating a milk pricing formula, the Secretary of Agriculture actually violates this act. This is a law on the books detailing what must be considered in the pricing formula.

7 The 1937 Act does not disallow the NASS survey or 8 say what factors may not be used in pricing milk. However, 9 it does dictate what factors must be considered, economic 10 conditions affecting the supply of milk.

11 It would seem that the intent of the 1937 12 Agriculture Marketing Agreement Act as amended in 1973 is to 13 "assure a level of farm income adequate to maintain 14 productive capacity to meet anticipated future needs." 15 Therefore, the maintenance of a sufficient domestic supply 16 to meet the nation's consumption needs plus a necessary 17 reserve supply is the crux of the matter. 18 As evidenced from USDA's own dairy statistics for 19 1999, U.S. dairy production was 162 billion pounds while 20 consumption passed 164 billion pounds. Thus, doing the

21 math, statistics show we are in a milk deficit nation to the 22 tune of over two billion pounds. And as a result, we are 23 caused to rely on foreign dairy products to fully meet

24 consumption demands.

25

In the weekly dairy market outlook put out by Ken

1 Bailey, a dairy economist at Penn State University, Mr. 2 Bailey confirms our dependence on imports. And I quote, 3 "The data shows imports rising and exports being relatively 4 flat. Imports are especially high for butter in 1998, 5 cheese in 1998 and '99, and milk protein concentrate." б "What is alarming is that there appears to be a 7 trend towards more and more net imports, net imports being equal to imports less the exports. In 1997, net imports 8 were 122.3 million dollars. But 1999 net imports were 404 9 10 million dollars. That is an increase of 231 percent." End 11 of quote. 12 These are competitive imports, those which we have 13 the domestic capabilities to produce, but are being displaced by foreign products. I concur with Mr. Bailey's 14 15 description of the situation as alarming. The trend to 16 become increasing dependent on foreign source of foods thus 17 accelerating the demise of the American family farm through 18 low commodity prices caused by supposed domestic surpluses 19 is indeed cause for concern. 20 And actually, we are in a dairy product deficit 21 condition with the surpluses being imported and thus 22 depressing our dairy farmers' prices. This jeopardizes the 23 ability of our nation to feed itself and further more comprises our national sustainability. 24

25 A county agent quoted a figure stating for every

1 cow a farmer has, he circulates \$2,300.00 in his rural 2 community's economy. For every cow he loses, over \$2,000.00 3 is not circulating in that community. What then must be the 4 consequences in individual communities as thousands of 5 family farms exit the industry? One 50-cow farm family б going out of business halts the circulation of \$115,000.00 7 in one economy. Multiply that by thousands across the 8 nation. 9 In 1970, there were 21,000 Pennsylvania dairy farmers. Today there are 8,000, a loss of over 13,000 10 11 farms. When farmers stay in business, the entire community 12 benefits -- the entire economy benefits. Foreign source 13 products do not circulate dollars through our communities 14 the way local farm products do. A cash cost consideration 15 would help to stabilize the situation. 16 Many testimonies given here this week will be 17 based on economics including yield factors, make allowances, 18 NASS surveys, PPDs, charts, graphs, documentation. Nevertheless, the most profound decisions ever made in this 19 20 nation were influenced by considerations other than economics alone. They were decisions made not only 21 22 considering the bottom line of the most efficient, but with 23 the realization that these decisions charted our nation's 24 course.

Certainly, you should give due thought to the

25

1 information presented here. But do not overlook the human 2 factor. A family farm is a place where responsible, 3 respectful, hard working youth are being nurtured into 4 upstanding American citizens with deep character and a work 5 ethic few can rival. б I ask you to do a right and a just thing here this 7 week. I ask you to consider the impact of your decisions on our youth, our families, our nation, our posterity for 8 generations to come. Please consider a cash cost of 9 10 production in the formula. 11 JUDGE HUNT: Any questions of Ms. Davis? Thank 12 you very much, Ms. Davis. Mr. Cochran, good afternoon. 13 Please raise your hand. 14 Whereupon, CYRUS COCHRAN 15 16 having been first duly sworn, was called as a 17 witness herein, was examined and testified as follows: 18 JUDGE HUNT: Would you state and spell your name 19 for the record. 20 THE WITNESS: Cyrus Cochran, C-Y-R-U-S C-O-C-H-R-A-N. My name is Cy Cochran. I am a 26-year-old fourth 21 22 generation dairy producer from Tyler County, Pennsylvania 23 which is located in the north central portion of the state. 24 I form a joint business venture with my father, Joe, and two 25 younger brothers, Josh and Nate, aged 23 and 19

1 respectively. A third brother, Cale, 16, intends to joint 2 the operation as well upon graduation from high school. 3 We currently milk about 150 cows, keep 4 approximately 130 replacement heifers, maintain a small beef 5 cow/calf operation and farm 652 tillable acres. We market б our milk as independent producers to Friendship Dairies 7 located in Friendship, New York, and possess a cordial 8 working relationship with this plant. 9 While Friendship Dairies is receiving considerable 10 marketplace leverage from large dairy cooperatives, we hope 11 that it will be able to maintain its independence as a 12 viable local milk market, offering a competitive reliable 13 premium package. 14 I am here today to support my proposal for the 15 United States Department of Agriculture to factor regional 16 cash cost of production into the Class III pricing formula. 17 There are several reasons why this is necessary. 18 To begin with, the 1937 Agricultural Marketing 19 Agreement Act, Section 608(C)(18) mandates that the 20 Secretary of Agriculture must adjust the minimum prices paid to producers to "reflect the price of feeds, the available 21 22 supplies of feeds and other economic conditions which affect 23 market supply and demand for milk or its products in the 24 marketing area to which the contemplated marketing 25 agreement, order or amendment relates."

1 This law was passed in 1937 in the public's 2 interest. And it is still in the public's interest. There 3 are a number of points here relative to implementing my 4 proposal. In my interpretation, the reference here to feed 5 prices and availability and other economic additions should clearly be construed as reference to the cash cost of б 7 production factor. 8 Additionally, the reference here to milk products 9 would seem applicable to cheese since this is what Class III 10 milk becomes. Furthermore, Class III milk is the biggest 11 class of milk utilization and in many months, the mover for 12 Class I prices. 13 Finally, the 1937 Agricultural Marketing Agreement 14 Act is law. Speaking of law, violations of and failure to 15 heed the law usually attracts the attention of the court 16 system one way or another. Last year in the St. Alban's 17 Cooperative Creamery, Incorporated, et al., Plaintiffs 18 versus Dan Glickman, Secretary of Agriculture, Defendant 19 case, United States District Judge William Sessions, III 20 granted an injunction preventing the new Federal Order System from being implemented on October 1st, 1999 as 21 22 originally had been expected. 23 In his opinion and order statement, the Judge

24 makes no fewer than five separate references to USDA's 25 failure to act according to the 1937 Agricultural Marketing

Agreement Act, Section 608(C)(18). In fact, in one section
 of the statement, the Judge's discussion of the lack of cost
 of production factors spans seven pages.

4 Examination of the document would properly lead 5 one to the conclusion that the cost of production factor's б absence was a primary reason why the injunction was granted. 7 Last summer, United States dairy producers voted by an 8 overwhelming majority to retain the Federal Order System. 9 USDA's failure to comply with the 1937 Agricultural 10 Marketing Agreement Act, Section 608(C)(18), as this 11 documented legal case history indicates, jeopardizes the 12 very existence of the Federal Order System.

Ironically, USDA publishes a pamphlet entitled question and answers on Federal Milk Marketing Orders. On pages 8 and 9, item 11, in an explanation on how specific price levels are determined, USDA mentions the 1937 Agricultural Marketing Agreement Act and its mandate to consider when determining price levels for milk factors that can be defined as cash production cost.

In my opinion, USDA needs to start practicing what it publishes. Under the current Class III and IV pricing formulas, make allowances are used to convert manufactured product prices to raw milk prices. In the same light, nowhere in these formulas is there a factor that is used to convert input cost of raw milk production to raw milk 1 prices.

2	To say the least, it seems very odd for USDA to
3	"make allowance" for processing costs before addressing milk
4	production cost factors when calculating minimum milk price
5	formulas. There is no absence of data on cash production
б	cost. USDA releases these on a monthly regional basis. And
7	these are published in the monthly reports from the various
8	market administrator offices.
9	For example, producers examining their Northeast
10	Order Market Administrator Bulletin on March prices would
11	find that the average cost of production in the northeast
12	survey was \$14.79 and the statistical uniform price at
13	Boston was \$12.39. A \$2.40 short fall was created.
14	Other industry studies can also be used for
15	analysis. For instance, a 1999 University of Massachusetts
16	study by Daniel A. Lass reports a median cash cost of
16 17	study by Daniel A. Lass reports a median cash cost of production in the New England Milk Market Order of \$14.64
16 17 18	study by Daniel A. Lass reports a median cash cost of production in the New England Milk Market Order of \$14.64 and an average cash cost of production of \$14.43. The
16 17 18 19	study by Daniel A. Lass reports a median cash cost of production in the New England Milk Market Order of \$14.64 and an average cash cost of production of \$14.43. The survey for the study was done in 1998 on '96 costs.
16 17 18 19 20	study by Daniel A. Lass reports a median cash cost of production in the New England Milk Market Order of \$14.64 and an average cash cost of production of \$14.43. The survey for the study was done in 1998 on '96 costs. While this particular study is somewhat dated and
16 17 18 19 20 21	<pre>study by Daniel A. Lass reports a median cash cost of production in the New England Milk Market Order of \$14.64 and an average cash cost of production of \$14.43. The survey for the study was done in 1998 on '96 costs. While this particular study is somewhat dated and more location-specific than what USDA currently surveys, I</pre>
16 17 18 19 20 21 22	<pre>study by Daniel A. Lass reports a median cash cost of production in the New England Milk Market Order of \$14.64 and an average cash cost of production of \$14.43. The survey for the study was done in 1998 on '96 costs. While this particular study is somewhat dated and more location-specific than what USDA currently surveys, I use it merely to highlight the point that cash costs can be</pre>
16 17 18 19 20 21 22 23	<pre>study by Daniel A. Lass reports a median cash cost of production in the New England Milk Market Order of \$14.64 and an average cash cost of production of \$14.43. The survey for the study was done in 1998 on '96 costs. While this particular study is somewhat dated and more location-specific than what USDA currently surveys, I use it merely to highlight the point that cash costs can be obtained accurately and specifically. Cash costs</pre>
16 17 18 19 20 21 22 23 24	<pre>study by Daniel A. Lass reports a median cash cost of production in the New England Milk Market Order of \$14.64 and an average cash cost of production of \$14.43. The survey for the study was done in 1998 on '96 costs. While this particular study is somewhat dated and more location-specific than what USDA currently surveys, I use it merely to highlight the point that cash costs can be obtained accurately and specifically. Cash costs discussions need not be vague or nonspecific.</pre>
like to see two factors reflected. These would be, first,
 wide range marketplace product value formulas based on true
 supply and demand indicators and, second, regional cash cost
 of production figures.

5 Plain and simply, I believe that one-third of the 6 Class III price formula should be a regional cash cost of 7 production. Consequently, in saying this, I am espousing 8 regional Class III pricing.

9 The next third of my proposed Class III formula 10 would be a Chicago Mercantile Exchange cheddar cheese value 11 less the appropriate make allowance for manufacturing cost. 12 As is indicated by several other proposals being 13 discussed this week, what is accepted here as suitable for 14 future product price calculations will likely be decided by 15 this hearing process.

16 The final third of my Class III price proposal 17 would be a retail cheddar cheese price reflecting the 18 consumer price index. In consideration of the supply and 19 demand factor, the consumer price index is of utmost 20 importance. As is evidenced by a chart compiled by New York producer John Bunting using U.S. Government data, the 21 22 consumer price index continues to rise even while Class III 23 Federal Order prices fall.

24 Conditions like this are disastrous to farm gate25 prices. As long as consumer prices rise while Class III

1 prices indicate lackluster or even poor demand, the consumer 2 receives no market signal to increase product consumption. 3 The result is dramatic Class III price volatility. 4 The use of the consumer price index is the best 5 indicator we have on true market conditions. As long as it б continues to rise, strong demand for product use is 7 indicated. Based on what I have presented, here is an 8 example of what my proposed Class III price formula would 9 look like for March 2000 in the Northeast Order. 10 NASS survey obtained Class III price is \$9.54. 11 USDA's northeast cash cost of production was \$14.79. And 12 the CPI for cheddar cheese calculated and converted to a price per hundred-weight was \$14.50. Weighing each of these 13 14 three factors to an equal 33.33 percent gives the Northeast 15 Order a \$12.94 Class III price for March. 16 Cash cost of production figures and the consumer 17 price index would be adjusted monthly and incorporated into the formula accordingly. It is important to note here that 18

19 if market values rise and cash costs fall below them, cash 20 costs will actually lower Class III prices.

I would like to make an important point at this time. While I understand that cheddar cheese has been the basis on how Class III milk is valued and I have continued to use it in my illustrated pricing formula, I feel that it represents too small a percentage of market usage to

1 adequately determine market price.

2	Just for the record, I feel that other types of
3	cheeses such as mozzarella should be given consideration for
4	a better, broader reflection of both wholesale and retail
5	prices. Additionally, I would like to remind everyone here
6	today that I am not an economist and lack both the time and
7	resources available to USDA to determine Class III price
8	formulas. The bottom line is that cash costs need to be in
9	the formula.
10	In closing, Secretary of Agriculture Dan Glickman
11	is failing to abide by the 1937 Agricultural Marketing
12	Agreement Act, Section 608(C)(18) to implement cost of
13	production factors. Additionally, in my opinion, the
14	Secretary jeopardizes national food supply by ostensibly
15	permitting production to shift out of this country due to
16	his omission of a cash cost pricing factor he is bound by
17	law to incorporate.
18	I testify here today as a dairy farmer and a
19	businessman. Any business owner who ignores the negative
20	discrepancy between cash cost and sale price of his product
21	will very rapidly find himself no longer a business owner.
22	As the facts support, on an average, dairy producers' pay
23	prices are currently not meeting their production costs

24 which leads to continued loss of dairy farmers and further 25 decline in the rural economy.

1 This loss of infrastructure leads to higher inputs 2 and loss of efficiency as is evidenced by the fact that I 3 now have no local veterinarian and drive two hours to a John 4 Deere dealer. These factors will continue to adversely 5 affect my cash production costs on an increasing scale as б the local dairy economy declines. 7 I would like to conclude by reiterating that USDA 8 has neither considered nor factored cash production costs in 9 its minimum pricing formulas and continues to violate law by 10 its failure to do so. There is ample evidence that the 11 public expects and needs a regional supply of milk. This 12 can only be brought about by the careful following of both 13 the letter and spirit of Section 608(C)(18) of the 1937 14 Agricultural Marketing Agreement Acct. Thank you. 15 JUDGE HUNT: Anyone have any questions of Mr. 16 Cochran? Thank you very much for coming today, Mr. Cochran. 17 THE WITNESS: Thank you. 18 JUDGE HUNT: Mr. Rosenbalm? Good afternoon, sir. 19 Whereupon, HENRY A. ROSENBALM 20 having been first duly sworn, was called as a 21 22 witness herein, was examined and testified as follows: 23 JUDGE HUNT: Would you state and spell your name, please? 24 25 THE WITNESS: Henry A. Rosenbaum, Henry,

1 H-E-N-R-Y, Rosenbalm, R-O-S-E-N-B-A-L-M. I am here as a 2 consumer, as a member of the Family Farm Defenders and as an 3 individual. In our free enterprise system, the cost of 4 production, costs of processing and manufacturing our 5 consumers goods has always been the burden of the consumer б through supply and demand of these goods. 7 With this in mind, the Family Farm Defenders, 8 myself are urging the USDA to eliminate the make allowance 9 for the processors and manufacturers, to add into the base 10 price formula the regional cost of production for individual 11 producers whether it is Arden Tewksbury's method, Cy 12 Cochran's method or Ms. Bonita Davis' method. You must 13 include the cost of production in the BFP. That's all I 14 have. Thank you. 15 JUDGE HUNT: Any questions of Mr. Rosenbalm? 16 Thank you very much, sir, for coming. 17 THE WITNESS: Thank you. 18 JUDGE HUNT: Now Dr. Barbano is going to testify. Good afternoon, sir. 19 20 Whereupon, DAVID BARBANO, Ph.D. 21 22 having been first duly sworn, was called as a 23 witness herein, was examined and testified as follows: 24 MR. ROSENBAUM: Your Honor, we have a procedural 25 matter to raise before he starts to testify.

1

JUDGE HUNT: All right. Go ahead.

2 MR. ROSENBAUM: I call it procedural. Maybe it is 3 more than that. I received, indeed it is on the website, 4 what I understand to be Dr. Barbano's intended testimony. 5 He has what he describes as "a different approach and some б new ideas for calculating the Class III price." And, 7 indeed, his testimony does reflect a different approach and 8 new ideas for calculating the Class III price. 9 The problem is that it was not contained within 10 the notice of hearing. None of the proposals reflect his 11 testimony. This is the whole purpose of a notice of 12 hearing, is to allow people to know substantially in advance 13 of the hearing what precisely it is they are going to be 14 confronting so they can prepare. We object to his 15 testimony. 16 JUDGE HUNT: Mr. Rosenbaum, I think the Department 17 has considered -- well, before we do anything further, Mr. 18 English, do you have some comment to make? MR. ENGLISH: I just wish to join that objection, 19 20 Your Honor. MR. YALE: Your Honor, if I may speak on this 21 22 issue. The Department had a request of its own at the end 23 of the notice of hearing that said, and I am simplifying it, but basically right now let's take a look at the possibility 24 25 of having a different Class III butterfat price than a Class

1 IV butterfat price.

2	And I am not saying we endorse Dr. Barbano's
3	testimony or his request, but this is the eminent scholar on
4	cheese manufacturing in the United States. He has an idea.
5	Whether it becomes a proposal that the Department adopts
6	maybe, maybe not. But it clearly is an important addition
7	to this hearing record to deal with these issues of make
8	allowances and yields. And I think that his response to
9	that request is consistent with what the Secretary had asked
10	for.
11	And I I mean, again, I am not saying we are
12	going to necessarily agree with his proposal. But I think
13	it is very much in the hearing record and it would be very
14	useful to this proceeding.
15	JUDGE HUNT: All right. Just a second. Mr.
16	Berde.
17	MR. BERDE: Your Honor, apparently everyone except
18	me is in the dark about what Dr. Barbano intends to testify
19	about or what his proposals entail. I wish I could respond
20	to the objections that have been made either by Mr.
21	Rosenbaum with whose witness I do not agree or with Mr. Yale
22	with whom I generally agree.
23	But in as much as we have not been advised of the
24	nature of the proposed of the proposals of Dr. Barbano

25 and whether they do or do not accord with what is contained

1 in the notice of hearing, I at least am at a loss to know 2 whether I should object or affirm. 3 Hence, I would appreciate it if somebody who knows 4 more than I do would advise me of just what the nature of 5 the objection is or what the basis for affirming what he б intends to testify about. 7 JUDGE HUNT: I understand your dilemma, Mr. Berde. 8 Mr. Rosenbalm, you had a comment to make? 9 MR. ROSENBALM: I find the objection appalling. This is an open hearing. We as dairy farmers in the state 10 11 of Wisconsin didn't even get notice of this hearing, much 12 less the opportunity to send you anything we are going to 13 testify about. I find you arrogant, sir. 14 MR. ROSENBAUM: Just to clarify, Dr. Barbano has 15 had his testimony, which I understand will be his 16 testimony -- perhaps he has made changes. But in any event, 17 it was posted on a website. And that is what I am relying 18 upon for my objection. I am not -- unless he has dropped his idea, I am 19 20 not speculating as to what he is going to testify about. And it is not consistent with the request of USDA for some 21 22 information about yield factors. If all Dr. Barbano were 23 talking about is what is the yield factor of butterfat and

24 cheese, I would have no objection.

25

But he goes beyond that and proposes some

1 substantial changes in the methodology for determining Class 2 III prices. And, of course, the Federal -- the notice of 3 this hearing was published in the Federal Register as is the 4 mechanism by which the United States Government lets all 5 interested parties know as to what it is they should be б prepared for. This is not something we are prepared for. 7 JUDGE HUNT: Anyone else have any comments on Dr. Barbano's proposed testimony. 8 9 MR. BERDE: Well, I have a suggestion as to how we 10 can solve the dilemma. Let him testify. And if it turns 11 out to be a proposal that is not within the notice of 12 hearing, we can move to strike his testimony. 13 JUDGE HUNT: Thank you for your suggestion. Yes, 14 sir. MR. JASPER: Yes, I would go along with that. I 15 see no -- let's hear what he has got to say. What are we 16 17 scared of here, people? Is there something we don't want to 18 hear? What are we scared of? JUDGE HUNT: Well, we don't have unlimited 19 20 discretion to testify to anything that somebody wants to testify. It has to be within the scope of the hearing. And 21 22 on that, I would like to have the Department address the 23 point, either Mr. Cooper or Ms. Brenner. 24 MR. COOPER: Well, like Mr. Berde, I don't life on

25 the website. So I have no idea what Mr. Barbano -- Dr.

Barbano is going to say today. From the few conversations I 1 2 have had in the last few minutes about what he is going to 3 say, it would seem to be that he may have labeled things as 4 proposals which are beyond the scope of the hearing notice. 5 But at the same time, the information that he is giving there may also be useful with regard to existing б 7 proposals or with the request at the end of the hearing 8 notice as to studying the effects of how all this relates to 9 the Class III price. And to the extent that there may be a 10 proposal that wasn't noticed and is not just a modification 11 of the other proposal, I agree that we can strike it at the 12 end to that extent. 13 To the extent he has information that may be 14 valuable in setting the butterfat prices and considering the 15 yields and such, that information can be received. So I 16 would suggest that we hear his testimony. And then anyone 17 who wants to strike portions of it can fire away. And we 18 will make up our minds then. JUDGE HUNT: Mr. Beshore. 19 20 MR. BESHORE: Well, the only -- I think Mr. 21 Cooper's comments are quite appropriate. And it would be 22 ironic in this hearing if we didn't take testimony from the 23 person considered to be I think by consensus the leading

24 expert on cheese manufacturing yields, processes, etcetera

25 in the country. Those are all issues in the hearing.

1 All of his comments, and I have read what is on 2 the website, are certainly pertinent with respect to 3 proposals that are in the notice or possible modifications to proposals that are in the notice. And at the worse, they 4 5 are extremely pertinent to the general subject matter. And б it should be heard. 7 JUDGE HUNT: Thank you, Mr. Beshore. Anyone else have any comments? I will defer to Mr. Cooper as being the 8 9 Department -- the Secretary's representative. And as the 10 Secretary's representative here along with Ms. Brenner, I 11 assume that they will know what is -- when they review the 12 record what is within the scope of the hearing as 13 appropriate for consideration, what is not. 14 And after -- I will allow Dr. Barbano to testify. 15 After his testimony and questions, anyone can move to strike 16 and I will rule on those motions at that time. All right. 17 Dr. Barbano, if you would state and spell your name for the 18 record, please. THE WITNESS: My name is David Barbano, D-A-V-I-D 19 20 B-A-R-B-A-N-O. I have copies for people that did not download this from the website. 21 22 JUDGE HUNT: All right. If you would go off the 23 record for a moment. 24 (Off the record.)

25 JUDGE HUNT: Back on the record. Dr. Barbano, if

1 you could state and spell your name, please.

2 THE WITNESS: The name is David Barbano, D-A-V-I-D 3 B-A-R-B-A-N-O. My areas of expertise are in cheese and whey 4 processing technology, milk component analysis, cheese 5 characteristics, milk composition and quality, cheese yield formulas, factors influence cheese yield and cheese б 7 manufacturing costs. I teach a course in chemistry of dairy 8 products and carry out research on these topics as part of 9 my responsibilities as a faculty member at Cornell 10 University. 11 I received my Ph.D. in food science from Cornell 12 University in 1978. I have been on the faculty at Cornell 13 University since 1980. I am not representing any company or 14 producer group at this hearing. I do not own or operate a 15 farm, cheese company or any other dairy product 16 manufacturing business. 17 My purpose in representing -- in presenting this information is 1) to provide the dairy industry and USDA 18 19 with a critical review of the current system of Class III 20 price calculation and assumptions used in this calculation and 2) to offer a different approach and some new ideas on 21

22 calculating a Class III price.

The approach that I will present is derived from the Van Slyke cheddar cheese yield formula. The objective of this approach is to provide better economic signals

between processors and milk producers. Hopefully a more
 fair and equitable reflection of changes in milk values both
 for producers and processors can be achieved.

Introduction. Historically, the basis for a
national Class III milk price was the Minnesota-Wisconsin
price series from manufacturing grade milk. When there was
a large volume of unregulated milk from manufacturing being
sold for cheese manufacturing, this price reflected the
unregulated free market value of milk for cheese-making.

10 Milk used for Class II or Class I products would 11 have a higher value. Over the years, the quantity of milk 12 represented by the Minnesota-Wisconsin price series 13 decreased. In the 1990s, the validity of using the 14 Minnesota-Wisconsin price series as the basis for setting 15 the uniform Class III milk price throughout the USDA Federal 16 Milk Marketing Orders was questioned.

17 Because of changes of industry structure within the U.S., the U.S. Congress mandated the USDA Federal Milk 18 19 Marketing Orders, reorganized to better reflect the current 20 milk marketing areas within the U.S. in the 1996 Farm Bill. At the same time, the Congress provided that USDA may make 21 22 revisions to the milk pricing system to ensure that fair and 23 equitable prices are paid to milk producers in all regions of the country and to harmonize the provisions of the system 24 25 of milk pricing in different regions of the country.

1	In doing this, a fundamental change was made to
2	the method for establishing the Class III price for milk
3	within the Federal Orders. Milk in the Class III would be
4	priced based on component values. The Van Slyke cheese
5	yield formula was used to calculate the butterfat and
6	protein factors, that is, the 1.852 and the 1.405 used to
7	arrive at a protein value in the Class III price
8	calculation. And the number 1 reference is to the first
9	reference in the reference list, number 1.
10	Starting January 1, 2000, the monthly Class III
11	price has been calculated as follows: The true protein
12	price per pound is determined in two steps, calculation of
13	the value of protein in cheese. It is the NASS monthly
14	cheddar cheese price minus the cheddar make allowance times
15	the 1.405. The 1.405 factor is derived from the Van Slyke
16	cheese yield formula and is designed to reflect the expected
17	increase in cheddar cheese yield that would occur for a unit
18	increase in true protein content of milk.
19	To calculate this factor, the following parameters
20	used in the Van Slyke formula calculation are needed. Fat
21	and true protein content of milk, the percentage fat
22	recovery in the cheese, the proportion of true protein that
23	is casein and the moisture content of the cheese. Selection

of a different set of assumptions for these parameters will product a factor different than 1.405.

1 Calculation of the extra value of protein due to 2 fat. This is the NASS monthly cheddar cheese price minus 3 the cheddar make allowance times 1.58, that quantity minus 4 the butterfat price per pound times 1.28. It is my 5 understanding the primary reason this calculation is done is to reflect the added value of milk fat in cheese in the б 7 absence of a discrete price for milk fat used in Class III. 8 The 1.582 factor is also derived from the Van 9 Slyke cheddar cheese yield formula and it is designed to 10 reflect the increase in cheese yield from a unit increase in 11 milk fat. Again, to calculate this factor, the following 12 parameters used in the Van Slyke formula calculation are 13 needed: fat and true protein content of milk, the 14 percentage of fat recovered in the cheese, the proportion of 15 true protein that is casein and the moisture content of the 16 cheese. 17 Selection of a different set of assumptions for

these parameters will produce a factor different than 1.582.
The 1.28 is not derived directly from the Van Slyke cheddar
cheese yield formula. It is my understanding that this
factor is supposed to reflect the amount of milk fat that
one pound of true protein in milk can hold in cheddar
cheese.

For the purpose of the calculations in Federal
Order reform and calculation of the Class III price, a milk

containing 3.5 percent fat, 2.9915 percent true protein and
 5.6935 percent other solids, that is 3.10 true protein and
 5.9 percent other solids in the skim portion of that milk
 has been used for calculations in the Class III price.

5 However, relative to the 1.28 assumption in the б calculation of the extra value of protein due to fat, the 7 average ratio of fat to true protein that exists in the milk 8 supply will probably be lower than this value all year. In 9 a national milk composition study of commingled milks in 10 cheese factories in the United States in 1984, it was found 11 that the ratio of fat to true protein varied throughout the 12 year with values ranging from 1.145 to 1.8.

Generally, the fat to casein ratio is lowest in June, July and August. These two values, i.e., that is the value of protein in the cheese and the extra value of protein due to fat are added together to arrive at the true protein price. The 1.405 and the 1.582 factors were derived from the Van Slyke cheese yield formula.

I give below in the testimony on page 3 a sample calculation using as a base the March 1999 Federal Order prices, the NASS cheese price at \$1.3064 per pound, the cheddar cheese make allowance at \$0.1702 per pound, the NASS whey powder price of \$0.1917 per pound and the whey powder make allowance of \$0.137 per pound.

25 The calculation of the true protein price is as

shown in steps 1, 2 and 3 below. The \$1.3064 minus the make 1 2 allowance of \$0.1702 times the \$1.05 gives \$1.5964 per 3 pound. The \$1.3064 minus the \$17.02 make allowance times 4 the \$1.582 fat factor minus the price per pound of milk fat 5 of \$1.4487 times \$1.28 gives the \$40.4464 per pound which б those two added together to net a \$2.0428 per pound of true 7 protein would be the calculated price of the protein in that 8 milk.

9 The other solids price calculation in the current 10 system is the NASS dry whey price in dollars per pound minus 11 the make allowance divided by 0.968 which is a factor for 12 moisture and the numbers are shown below, 19.17 minus the 13 0.137 divided by 0.968 gives the other solids price per 14 pound. The 0.968 factor is used to reflect the average --15 on average dry whey contains 3.2 percent moisture by weight. 16 The Class III skim price is calculated as shown 17 below. The -- at a 3.1 percent true protein and a 5.9 18 percent other solids as a standard skim milk average composition, the true protein times 3.1. So that would be 19 20 the \$2.0428 times 3.1 gives a value of \$6.3330. The other solids, 5.9 times the other solids price gives the \$0.3334. 21 22 And this together gives the skim value per hundred weight of 23 \$6.6664.

24 The -- step D, the Class III price then takes the 25 value of the skim portion and the value of the fat portion

1 at 3.5 percent fat as shown in that calculation to give a 2 price of \$11.5036. This I am taking as the base. And from 3 here I will make all my comparisons. But to make it clear 4 where the base comes from.

5 The behavior of the Class III whole milk and skim 6 milk prices when fat values change. In my opinion, when the 7 Class III milk price calculation as described above is used 8 to calculate the whole and skim milk values in Class III 9 with changing butterfat prices and milk compositions, the 10 changes in milk prices in relation to milk fat price do not 11 give a sensible economic signal to milk producers.

12 The fundamental problem in the current Class III 13 price calculation is that when value of milk fat goes up 14 driven by an increasing butter price, the calculated true 15 protein value in dollars per pound of protein goes down. It 16 goes down -- it decreases at a faster rate than the value of 17 the milk fat increases.

Thus when the price of butter increases, the Class III milk price, i.e. the milk price paid by cheese-makers as a minimum price for a milk that has a fat-to-protein ratio of less than 1.28 will go down. And I will use several examples to illustrate this point.

In Figure 1, the -- we have the butter price along the X axis and the milk price along the Y axis. The butter price has increased from \$1.00 a pound to \$1.90 per pound.

For a producer with a milk that contains 3.8 percent fat,
 2.99 percent true protein and 5.68 other solids, the price
 paid for milk by the cheese-maker will remain constant as
 the butter price increases from \$1.00 to \$1.90 per pound.

5 This means that the price for the skim portion 6 paid to this producer is going down at the same rate the fat 7 value in the milk is increasing. Thus, despite the fact 8 that butter is short and the price is high, the price at 9 constant milk composition that a farmer with a ratio of milk 10 fat to true protein less than 1.28 receives from milk 11 decreases with increasing price of butterfat.

As seen from Figure 1, a producer with a 1.36 ratio of fat to true protein, the milk price goes up by about 30 cents per hundred-weight when the butter price increases from \$1.00 to \$1.90 per pound. That is the top line in Figure 1.

However, for a producer with a ratio of 1.0 of fat to protein and a 2.99 fat test, the price of the milk goes down by about \$1.00 per hundred-weight as the butter price increases from \$1.00 to \$1.90 per pound. That is the bottom line in that graph.

This is not the correct economic signal to send to dairy farmers in this situation. If a plot of skim milk value instead of whole milk value is made, the decrease in skim milk value as butter price increases and cheese price

remains constant is even more dramatic than that shown for
 whole milk in Figure 1.

3 How does this impact producers in the market? 4 Figure 2 shown at the bottom of page 5 is a frequency 5 distribution of fat-to-true protein ratio for producer milk б from the Southwest Federal Milk Market Order. This is 7 provided by the Market Administrators Office to me. The 8 distribution represents 16,230 observations in that Federal 9 Order in 1999 for the average fat-to-true protein ratio. 10 The distribution of fat to casein ratios is 11 relatively normal in shape. But the median ratio of fat to 12 true protein is 1.7 -- 1.17, excuse me. The -- in that

13 sentence, the first part where I said the distribution of 14 fat to casein ratios should be -- it should read fat-to-15 protein ratios.

16 Only about 5 percent of the producer milk samples 17 had a fat-to-true-protein ratio that was greater than or 18 higher than 1.28. Thus when butter prices increase, the 19 average Class III price for the group of producers with fat-20 to-true protein ratios less than 1.28 will decrease at a 21 constant cheese and whey powder price.

At first glance, one might say moving the 1.28 factor to 1.17 will fix the problem for this group of producers. However, what this will do is make the price paid to half the producers go up and half the producers go down when butter price increases. When milk fat value, the
 NASS AA butter price increases, the price paid to every
 producer from milk should go up to reflect the increased
 value of the fat portion of the milk.

5 While the current system for Class III price 6 calculation represents a tremendous amount of thinking and 7 development by the industry and USDA staff, in my opinion, 8 the current system for the Class III price calculation is 9 not providing the correct economic signals from processor to 10 producer when market prices of various products change,

11 particularly milk fat.

12 There are additional and more subtle issues in the 13 current Class III price calculation that trouble me. But in 14 my view, the one illustrated in Figures 1 and 2 is the major 15 one and it needs to be corrected. Thus, I have come to this 16 hearing to present some ideas on how to eliminate some of 17 the shortcomings of the current method of calculation of the 18 Class III price for milk within the Federal Milk Market 19 Orders.

How should the dairy industry modify the Class III price calculation to eliminate these shortcomings? The approach that I propose is also based on the Van Slyke cheese yield formula. The Van Slyke formula works well for full fat cheddar cheese made from milk that is not fortified with nonfat milk solids.

1 For other cheeses and cheeses made using fortified 2 milks, other yield formulas would be more appropriate and 3 they are described in reference 2 for the prediction of 4 cheese yield. In my opinion, the selection of cheddar 5 cheese made without nonfat solids fortification of milk for б cheese-making is the right choice as the basis for the Class 7 III minimum uniform milk price calculation. 8 Below I will provide the full detail for the basis 9 of the different methods of Class III uniform price 10 calculation. First, I would like to explain the Van Slyke 11 cheddar cheese yield formula. The cheddar cheese yield as a 12 theoretical formula is equal to the percent fat recovery that is expected, the amount of fat retained in the cheese 13 14 multiplied by the fat content of the milk used to make the 15 cheese. 16 The 0.78 times crude protein is an estimate of the 17 casein content of milk. And this is the original formula for the Van Slyke minus a fixed loss of casein of 0.1, that 18 19 whole portion in the numerator multiplied by 1.09. One 20 minus the cheese moisture divided by 100 is in the 21 denominator. 22 The values selected for percent fat recovery in

the cheese for calculation can be debated. However, a 93
percent fat recovery in the cheese is achievable with modern
cheese-making equipment and was achievable in the mid-1890s

1 when Van Slyke developed his cheese yield formula based on 2 observations of cheddar cheese-making practice in many 3 factories in central New York over a two-year period. 4 The 0.78 times crude protein is a substitute for a 5 measurement of casein content of the milk. The original Van Slyke formula uses percent milk casein. The industry has б 7 used an assumption of 78 percent of crude protein content of 8 milk as casein. 9 For a 3.67 percent fat milk with a 3.1762 crude 10 protein, that is 3.1 percent true protein in the skim 11 portion, it contains 2.9862 percent true protein, the 12 multiplier mathematically equivalent to 0.78 for the crude 13 protein calculation for estimation of casein from true 14 protein then is 0.8295. 15 The minus 0.1 used in the equation reflects an 16 expected fixed loss of casein into whey that will occur 17 during cheese-making regardless of starting milk composition. The 1.09 factor in the equation accounts for 18 19 the nonfat, non-casein milk solids expected to be retained 20 in the moisture phase of the cheese and the added salt in 21 the cheese. 22 The constant 1.09 value assumes that the final 23 cheese contains about 1.7 percent salt. Thus, the numerator in the Van Slyke equation calculates the weight of milk 24

solids plus added salt that is expected to be collected as

25

1 cheese given the milk composition values used in the 2 calculation.

The denominator of the Van Slyke equation simply adjusts the calculated total yield of cheddar cheese to the target moisture percentage used in the formula. Thus the formula can predict expected cheddar cheese yields for milks of different fat and protein contents at selected moisture contents.

9 The following are all the parameters where 10 assumptions and values are needed in the calculation of 11 Class III price that I propose. The values in this format 12 are part of a spreadsheet that I have used to summarize all 13 of the values used in the calculation.

The -- on the web copy, the blue values and in the original spreadsheet that is posted on the web, those values in blue can be varied for sensitivity analysis. And the numbers that were in black are values that can be calculated as intermediates in my calculation.

19 I have been told that the different values from 20 the ones that I have mentioned above were used in the Van 21 Slyke cheese yield formula when the protein and fat factors, 22 that is the 1.405 and the 1.582, were derived to use as the 23 basis for calculation of the protein value in the pricing 24 system initiated on January 1, 2000.

25 It is my understanding that for the current

pricing system, the value used for fat recovery in cheese is 90 percent. The value for casein as a percentage of crude protein is 0.75 percent. And the value for moisture content of the cheddar cheese is 38 percent.

5 I will use those default values and those are what б were posted in my calculations that were on the website. I 7 am now at the top of page 8. And what I would like to do is 8 there is another handout that has two pages. This was not 9 on the website. But based on questions I have received from 10 people after they have read this, I felt it was useful to 11 identify why I have indicated that I think USDA used 75 12 percent of casein -- of protein as casein. 13 Going to that two-page document, calculation of 14 the 1.582 fat and 1.405 protein factors in the current 15 system, I refer --16 MR. COOPER: Excuse me. Could we just identify 17 that by the top line for the record? 18 THE WITNESS: The top line says, "Barbano -Cornell University, May 8th, 2000", and then reads, 19 20 "Calculation of the 1.582 fat and the 1.405 protein factors 21 for the current system." 22 MR. COOPER: And that is the two-page document you 23 were talking about, Doctor? 24 THE WITNESS: Yes.

25 MR. COOPER: Thank you.

1 JUDGE HUNT: It was handed out. I don't know if 2 people have copies. Do they? 3 MR. OLSEN: Your Honor, we don't have a copy of 4 that. I don't know if there is a copy in the back here. JUDGE HUNT: Off the record. 5 6 (Whereupon, a brief recess was taken.) 7 JUDGE HUNT: We will mark these in order of the exhibits that we already have. We left off at 14. So I 8 9 will mark your testimony as 15 then. Does everyone have 10 copies of Dr. Barbano's testimony and documents? All right. 11 If you take his testimony and we will mark that as Proposed 12 Exhibit Number 15. That is his testimony. And then with 13 the document with his calculations, if you would mark that 14 as 16. The two-pager, that would be 16. It is entitled, "Dr. Barbano - Cornell University, May 8, 2000" at the top. 15 16 That is 16. And then the one that starts out -- the 17 spreadsheet will be marked as 17. All right. Doctor, do 18 you want to resume then? 19 (The document referred to was 20 marked for identification as Proposed Exhibit Nos. 15, 16 21 22 and 17.) 23 THE WITNESS: Okay. Calculation of the 1.582 fat and 1.405 protein factors in the current system. These two 24 25 pages were not posted on the website. And I prepared these

two pages based on the questions and comments that I got from people who had looked at ahead of the hearing the material on the website and contacted me with some questions about how these things were derived. And I added this for additional clarification.

6 The -- on page 183 of the final rule, it says, I 7 quote, both the 1.405 and the 1.582 factors are determined 8 by calculating the change in cheese yield if an additional 9 tenth of a pound of protein or butterfat is contained in the 10 milk holding everything else constant.

11 The proposed rule used a 1.32 factor times the 12 cheese for use in computing the protein price. The change 13 to a factor of 1.405 reflects the use of true protein as the 14 basis for payments rather than using a measurement of "total 15 nitrogen" for the protein content of milk. The resulting 16 protein price will be for a pound of true protein. That 17 quote is directly from the final rule, page 183. And that 18 is the basis for my interpretation of how the current system of pricing is arriving at those factors. And I demonstrate 19 20 the calculations of those below.

I am assuming that the milk composition -- and this is to get the 1.32 factor which was in the proposed rule -- that starting with a milk that contains a fat of 3.5 percent, a crude protein of 3.20 and with a cheese moisture target of 38 percent, I show below the calculation of the protein factor assuming a 75 percent of crude protein as
 casein.

3 And this is what I am saying that I assume that 4 has been used as the basis in the current pricing system. 5 And that is the point of contention. I show the calculation б in the first equation underneath that line that substitutes 7 in the values for milk composition and the 38 percent 8 moisture and uses where you see the 0.75 times 3.2, that is 9 percent crude protein in the calculation produces a cheese 10 yield at the far right in that calculation of 9.5815 pounds 11 per hundred-weight.

12 In the second set of equations shown below that, I 13 have done exactly what it says in the final order. I have 14 increased the concentration of protein from 3.2 to 3.3 15 holding everything else constant and calculate the 16 theoretical yield with the Van Slyke formula. And it 17 arrives at a 9.7133.

18 The difference between those two yields that has 19 been caused by a difference of 0.1 percent protein is 0.138 20 pounds of cheese per 0.1 pound of crude protein or, in other 21 words, 1.318 pounds of cheese produced for one more pound of 22 crude protein. This value rounds to 1.32.

The calculation of the protein factor, what would the protein factor be if we assumed a 78 percent of crude protein as casein? I show those calculations below. Using

the same technique as was used in the two calculations above, I come out with a cheese yield for a change from 3.2 to 3.3 percent crude protein, a cheese yield of 9.7502 at 3.2 using the 78 percent crude protein as casein. And I come out at 3.3 percent protein with a

9.8874. This difference in yield then is 0.137 pounds of cheese per 0.1 pound of crude protein or a 1.371 pounds of cheese produced for one more pound of crude protein. This rounds to 1.7. Therefore, based on what was in the final rule and these calculations, I conclude that USDA to get the original 1.32 must have used a 0.75 casein as a percentage of protein as a factor in that calculation.

13 The other thing that was done going on to page 2 14 is adjustment of the 1.32 factor which was set up for crude 15 protein, to change it from a crude to a true protein basis. 16 If we take the ratio in that 3.2 milk and assume that we 17 want to calculate the true protein, the amount of non-18 protein nitrogen is equivalent to 0.19 percent protein. So 19 a true protein of 3.01 and a crude protein of 3.20 gives a 20 factor or ratio of 1.0631. That value multiplied by the 21 1.32 equals 1.403.

As far as I understand, the number being used is 1.405. And I don't know whether it was rounded to 1.405. But that is as close as I come to 1.405 using this calculation.

1 If we assume that they used 0.78 instead of 0.75 2 as was described on the previous page and there was a 1.37 3 factor for crude protein, then doing this same adjustment to 4 change the factor from a crude protein to a true protein 5 basis would yield a factor of 1.37 times 1.0631 or a 1.456 6 as the protein factor.

7 I have also shown for completeness right after 8 that the calculation of the fat factor assuming a 90-percent 9 fat recovery in the cheese. Again, I have followed the 10 instructions given in the final rule where I have taken the 11 milk composition now using the 75 percent of the crude 12 protein as casein, holding protein constant at 3.2 in the 13 equation, and changing the fat content. The first equation 14 uses 3.5 percent fat times 0.9. And the second equation 15 uses 3.6 percent fat times 0.9.

16 These two calculations provide cheese yields of 17 9.5815 shown on the far right and 9.7397. The difference 18 between those two is 0.1582 pounds of cheese per 0.1 pound 19 of fat or the 1.582 pounds of cheese produced for one more 20 pound of milk fat.

That two-page summary was to clarify how I concluded that the current system is based on a 75-percent casein as a percentage of crude protein. I will return back now to page 8 of 15?

25 JUDGE HUNT: Yes.

1 THE WITNESS: -- of Exhibit 15. And it reads at 2 the top, "Table 1, Composition Assumptions and Values Used 3 in the Current Class III Price Calculation, March '99 Data 4 Used in this Example."

5 On the left-hand side of this table, it indicates 6 various items or factors, the first one being the milk fat 7 content assumed to be 3.5 percent, crude protein at 3.185, 8 casein as a percentage of crude protein of 75 percent. And 9 this is what I just got through explaining where I concluded 10 that that is what they use currently.

11 True protein at 2.9915 which is consistent with 12 the assumption that the skim portion of the milk contains 13 3.1 percent true protein. Casein as a percentage of true 14 protein is this value of 79.7635 is the value that would be 15 consistent with the 75 percent number shown above. So as 16 you go down this column, everything is for this same milk. 17 And these are the values.

18 The casein content using that 75 percent would be 19 2.3861. The milk serum protein content, which this is the 20 rest of the protein that isn't casein would be 0.6054. The 21 other solids content of this milk is 5.6935. And the milk 22 total solids content is 12.185.

I am assuming in the calculations that there is a 90 percent fat recovery in the cheese and that the nonfat, non-casein solids factor for the Van Slyke yield is 1.09.

2 moisture that is calculated from that milk is 9.5571 pounds 3 per hundred-weight of milk.

The Van Slyke cheddar cheese yield then at the target

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In that cheese based on the recoveries in the equations, it will contain 3.15 pounds of fat. It will contain 2.2861 pounds of true protein. And by difference from the original amount of true protein in the milk, the 0.7054 is the amount of true protein that is not in the cheese.

10 The next line is the NASS cheddar cheese price in 11 dollars per pound for that March 1999. The cheddar cheese 12 make allowance, what was there for March '99, is the 0.1702, 13 the cheddar cheese composition. These values in terms of 14 composition for fat, protein, skim portion are -- once you 15 define the moisture and the recovery of protein and the 16 recovery of fat, these are the compositions that would have 17 to result if you achieve those recoveries. This is simple 18 math in terms of balancing the components.

The fat content of the cheese would be 32.9599. The protein content of the cheese would be 23.9208. And the amount or the skim portion of the cheese would be 67.0401 of the total weight, percentage of the total weight. And the moisture content is the target of 38. This will produce a cheese with a fat on a dry basis of 53.1612.

25 And the that cheese, because there are other

1 solids contained in the water portion of the cheese, 2 contains or would contain based on the Van Slyke formula --3 this all comes from the Van Slyke formula -- it would 4 contain 0.3268 pounds of other solids in that cheese. 5 I am assuming in the calculations the NASS whey б powder price of 0.1917 dollars per pound which is the March 7 price. Moisture of the whey powder I am assuming at 3.2 8 percent. The whey powder make allowance I am assuming at 9 the 0.1370. These are the values for March '99. I am not 10 taking any position on what the make allowance should be. 11 These are the values given for the example.

Based on the yield of cheese and the solids that are in the milk, the other solids and the protein and how the protein partitions between the cheese and not in the cheese, you can calculate the yield of whey powder at 3.2 percent moisture. And that yield is 6.2728 pounds.

17 Within that whey powder, the pounds of true 18 protein that were not in the cheese would be calculated in 19 the whey powder. And the pounds of other solids that go 20 with that from milk that are not in the cheese wind up as 21 part of the whey powder yield.

Let me explain this. The basis of milk composition shown in Table 1 are as follows: The true protein and other solid values are from the Federal Orders that are thought to represent the annual average skim milk composition in the United States. The true protein, 2.9915, and other solids of 5.6935, those values for 3.5 milk fat -milk containing 3.5 milk fat correspond to a 3.1 percent true protein and 5.9 percent other solids content in the skim portion of that milk.

6 The crude protein value is calculated assuming 7 that there is 0.19 percent protein equivalent as non-protein 8 nitrogen in the average milk. A value of 75 percent of 9 crude protein was used by AMS for calculation of the casein 10 content of milk in the current pricing system. So I have 11 used this as a default value for my first calculations.

12 This value was used to calculate the equivalent 13 value of casein as a percentage of true protein. For this 14 example, the casein as a percentage of true protein is 15 79.7635 percent. I show both values because the industry 16 has only recently started working with true protein as the 17 basis for payment. And there is a need to show how a value 18 equivalent to 75 percent casein as a percentage of crude 19 protein was derived.

In Table 1, the milk serum protein percentage is simply the true protein minus the casein percentage. The milk total solids content is calculated from the sum of fat, true protein and other solids.

The cheese yield formula. The Van Slyke yield
formula is as described -- as I described above previously.

1 The value for fat recovery in cheese used in this example is 2 90 percent. The nonfat, non-casein milk solids plus salt 3 retention factor in the cheese is 1.09. The cheese yield 4 value given is the value calculated at this milk composition 5 for a cheese with 38 percent moisture.

6 The pounds of fat in the cheese, the pounds of 7 true protein in the cheese come directly from the numerator 8 of the cheese yield equation. The pounds of true protein 9 not in the cheese is calculated as the difference between 10 the pounds of true protein in the milk minus the pounds of 11 true protein retained in the cheese. This will be the 12 pounds of true protein that goes into the whey powder.

Next, the NASS prices. The NASS cheddar cheese price is a value calculated by the USDA dairy programs based on the weekly survey of cheese prices. The price survey data has the following characteristics: Block cheddar, the moisture content of block cheese reported in the survey is not reported to NASS. One can assume that it is less than the legal maximum moisture for cheddar of 39 percent.

20 NASS specifies that the moisture content of the 21 blocks shall not be less than 36.5 percent. It is assumed 22 that the cheese meets the minimum requirement for full fat 23 cheddar cheese of 50 percent fat on a dry basis. The price 24 reported by NASS for blocks includes the costs of packaging 25 of the 40-pound blocks as described in the instructions and

the cheeses colored to between a 6 and 8 on the National
 Cheese Institute Color chart.

The price should reflect cheese wrapped in sealed air-tight packaging and corrugated or solid fiberboard containers with reinforcing inner-sleeve. All other packaging costs are excluded from the reported prices. The sale is when the transaction is complete, i.e. the cheese is shipped out and the title is transferred.

9 Inter-company sales, resale of cheese,
10 transportation, clearing charges are not included in the
11 price. The price is FOB the processing plant or storage
12 center. Blocks must meet Wisconsin state brand USDA Grade A
13 or better. Blocks of cheese made for aging are not included
14 in the survey.

Barrel cheddar. Cheese reported as barrel cheese cannot exceed 37.7 percent moisture content. This is based on a Chicago Mercantile Exchange rules which state that cheese excluding -- exceeding this moisture content cannot be invoiced on a moisture basis.

The moisture content of barrel cheese is known and reported on the NASS survey results. The fat on a dry basis for the barrel cheese is not known, but it must exceed 50 percent to comply with the standard of identity for cheese. The reported cheese price by the manufacturer for barrel cheese is at the actual moisture test of the cheese
1 reported. And this price includes no packaging costs. 2 NASS calculates a moisture adjustment to bring all 3 prices to a 39 percent moisture basis for barrel cheese. 4 The cheese is white and must meet Wisconsin state brand USDA 5 extra grade or better, the sales on the transaction is б complete; that is, cheese is shipped out and title transfer 7 occurs, intra-company sales, resale of cheese, transportation, clearing charges are not included in the 8 9 price. Price is FOB the processing plant or storage center. 10 The monthly NASS price used in the Class III milk 11 price calculation. The weighted average monthly cheddar 12 cheese price used in the Class III price formula is computed 13 by USDA Agricultural Marketing Service per the provisions of 14 the order. A weighted average is computed for blocks and 15 barrels each using the applicable weekly prices and weights. 16 The prices are computed to four decimal places. 17 No adjustments are made to the published NASS prices. Three 18 cents are added to the barrel average and then the block and 19 barrel averages are weighted using the monthly weights. 20 This price is rounded to four decimal places and is used in 21 the Class III price calculation. 22 The average moisture test of the cheese that 23 corresponds to the combined block-plus-barrel cheddar cheese price is not known. But given the instructions in the 24

25 survey, it must be between 36.5 and 39 percent.

1 If the amount of barrel cheese in the survey for a 2 month is about 62 percent of the total weight of cheese in 3 the survey and we assume all the block cheese is at the 4 minimum moisture content, then the moisture content of the 5 cheese represented by this price would be about 38.05 6 percent.

7 In my opinion, it would be a benefit to the dairy 8 industry if moisture data were collected for block cheddar 9 cheese represented in the NASS survey. This would allow the 10 cheese price produced by the NASS survey to be associated 11 with a specific moisture content that would be known.

12 With this information, the moisture content in the 13 cheese yield formula used to calculate the Class III price 14 would produce prices for fat and protein in cheddar cheese 15 that are in harmony with the moisture basis for the NASS 16 cheese price.

17 NASS whey powder price used in the Class III milk 18 price calculation. The product is USDA extra grade edible 19 nonhydroscopic dry whey. The price is FOB the processing 20 plant/storage center. Prices are reported for all 25 21 kilogram, 50-pound bag, tote and tanker sales. 22 The following are excluded: Transportation

charges, sales of Grade A dry whey, sales of dry whey more than 180 days old, intracompany sales, resales of purchased dried whey. The current Class III price calculation for

other solids assumes that the whey powder contains 3.2
 percent moisture.

3 Cheddar cheese composition. A value for cheddar 4 cheese moisture content must be selected for use in the 5 cheddar cheese yield calculation. In the default values 6 used in Table 1, the value is set at 38 percent moisture. 7 This value was used by USDA to calculate the protein and fat 8 factors in the current pricing system.

9 However, as already mentioned in the discussion of 10 the NASS cheese prices, the moisture content selected for 11 use in the yield calculation should be consistent with the 12 moisture content of the cheese included in the NASS survey. 13 Once a target moisture value is established, then the 14 cheddar cheese composition can be calculated for milk 15 composition values and the cheese yield formula.

16 The fat and true protein content of the cheese 17 shown in Table 1 is the pounds of fat and true protein retained in the cheese divided by the cheese yield 18 multiplied by 100. The salt content assumed (as part of the 19 20 1.09 value in the Van Slyke cheese yield formula) is 1.7 percent. The skim portion of the cheddar cheese in Table 1 21 22 is 100 percent minus the percent fat plus the percent solid 23 in the cheese.

Whey powder yield. The weight of true protein in the whey powder, shown in Table 1, is the weight of true

protein contained in the milk minus the weight of true
protein contained in the cheese. The weight of other solids
in the whey powder, Table 1, is the weight of other solids
in the milk minus the weight of other solids retained in the
cheese.

6 The weight of other solids in the cheese in Table 7 1 is calculated by taking the weights of solids in cheese 8 minus the weight of fat plus true protein plus the solid in 9 the cheese. The calculation assumes that the cheese 10 contains 1.7 percent solid. This number is the amount of 11 other solids retained as dissolved solids in the water 12 portion of the cheese.

The sum of other solids plus true protein in the whey powder divided by 1 minus the percent moisture in the whey powder, that is, 1 minus 3.2 divided by 100, provides an estimate of the whey powder yield at 3.2 percent moisture.

18 Cheddar cheese and dry whey make allowances. The 19 values in Table 1 are defined as fixed values that are used 20 in the calculation of Class III price by USDA. They are based on input from industry data for cheddar cheese 21 22 manufacturing costs. Dry whey manufacturing costs are based 23 on a study conducted at Cornell University. It would be useful to have a clear and complete description of what is 24 25 included and what is not included in cheese and whey make

1 allowances.

25

2	The make allowances are expressed as dollars per
3	pound of cheese. However, a higher percentage of make costs
4	are fixed and relate better to hundred-weight of liquid in
5	the vat not directly to a pound of cheese. Thus when milk
6	composition varies within normal ranges and produces
7	calculated changes in yield, the true make costs for cheese
8	do not increase or decrease as much with the change as
9	cheese yield change of cheese yield as one would
10	calculate.
11	Thus caution must be used when calculating returns
12	to a cheese-maker when milk composition and, therefore,
13	theoretical cheese yield varies with changing milk
14	composition.
15	Moving to page 12 at the top of the page, "Method
16	Proposed by David Barbano for Calculation of the Class III
17	Milk Price." The input data shown in Table 1 are used as
18	the current default values for the purpose of comparison of
19	the Class III price at 3.5 percent fat by the calculation I
20	have proposed versus the Class III price calculated under
21	the current milk pricing system at the same milk
22	composition.
23	To the best of my knowledge, the default values
24	shown in Table 1 represent the values currently used by USDA

and the prices are from March 1999. This does not mean that

1 I agree with the current default values being used by USDA. 2 That issue will be addressed later in my discussion. 3 The new method of calculation that I propose has 4 three steps. These steps and a sample calculation are shown 5 on a spreadsheet that is provided with this description. And that spreadsheet is shown on page 15 and 16 of this б 7 document. 8 JUDGE HUNT: That is 17? 9 THE WITNESS: No, of Exhibit 15, the one we are on 10 currently. 11 JUDGE HUNT: Oh, okay, sir. Excuse me. 12 THE WITNESS: Pages 15 and 16. What I will be 13 describing as these three steps in the calculation are shown 14 as step 1, step 2 and step 3 with values and a description 15 on page 16 in the copy of what is in the spreadsheet. But 16 verbally, I will explain what is happening. 17 Step 1, Class III fat value equals the NASS 18 cheddar cheese price. For this example, the value would be \$1.3064. The current Class III milk pricing system 19 20 initiated as a result of the Federal Order reform struggles with this issue. The current system does not establish a 21 22 separate Class III price for butterfat. But instead adds a 23 fat value to the protein value.

24 This is the fundamental cause of the problem with 25 the current pricing system that was demonstrated in Figures

1 and 2. Therefore, in step 1 of the proposed calculation,
 the milk fat used in Class III is priced at the same value
 in dollars per pound as the NASS price for cheese.

4 In bold, the next sentence, this is the key new 5 step used in my approach to calculate a Class III price б based on the price of cheese. Once a price per pound of 7 cheese is established, all parts of that cheese have that value in the marketplace when it is sold. Therefore, I 8 9 assign the cheese price per pound to the fat and calculate 10 the portion of the total value of a pound of cheese that is 11 fat.

12 The residual weight of the nonfat portion of the 13 cheese takes on the remainder of the value per pound of 14 cheese. And all of this value minus a make allowance is 15 allocated to the protein retained in the cheese. Cheddar 16 cheese has a defined minimum fat content of 50 percent on a 17 dry basis. In reality, cheese of acceptable quality for 18 processing can be made in the range of 50 to 55 percent fat 19 on a dry basis.

Thus, the selling price of the cheese is the price that the cheese-maker receives for the fat sold in the cheese. If milk fat has a higher value in other utilization classes, then the cheese-maker will have a signal to remove fat from milk as cream in excess of that needed to achieve the 50 percent fat on a dry basis.

If milk fat has a lower value in other utilization classes than Class III, then the cheese-maker will have a signal to keep more fat in the cheese up to the limit that acceptable cheese quality will allow. This should contribute to the development of reduced volatility of fat prices in the long run.

7 With respect to the use of whey cream in the 8 manufacture of cheddar cheese for processing, when the price 9 of milk fat in other classes is low, there will be an 10 incentive for the cheese-maker to try to recover fat from 11 whey cream and incorporate it in the cheese.

12 If the value of fat in other classes is higher and 13 if the value of whey cream that could be sold outside the 14 plant exceeds its use value as cheese, then whey cream will 15 move into the market to provide an increased supply of fat 16 for utilization in other products, for example, ice cream, 17 cheese, etcetera, in other classes when cream is tight. So 18 step 1 establishes the value of fat.

19 Step 2, the value of true protein in the milk 20 equals the value of the true protein in the cheese plus the 21 value of the true protein in the dry whey. First, the value 22 of the skim portion of the cheese is calculated. The skim 23 portion in a pound of cheese is the fat and solid portion in 24 a pound of cheese subtracted from 1.

25 In the example, Table 2 -- Table 2, excuse me, the

1 skim portion of the cheese is 67.0401 percent of the cheese. 2 This value is divided by 100 and multiplied by the NASS 3 cheese price per pound that would be 67.0401 divided by 100 times the 1.3064 or \$0.8758 per pound of protein. 4 5 The full cheddar cheese make allowance is б subtracted from this value -- that is the 0.1702 -- to give 7 a value of true protein in one pound of cheese as 0.7056. The value of protein in a pound of cheese divided by the 8 9 pounds of true protein in a pound of cheese equals the true 10 protein value. That would be in this calculation as shown 11 on page 16, the \$2.9498 per pound.

12 Like the value of fat in cheese, the value of true 13 protein per pound in the whey powder is assigned the value 14 as the NASS whey powder price. That is \$0.1917 per pound in 15 this example. So the true protein is assigned the value of 16 the price per pound of the whey powder. Again, this is an 17 important assumption that relates the value of true protein 18 and dry whey directly to the changes in value of whey powder 19 in the marketplace.

The remaining value of the whey powder is assigned to the other solids fraction of milk. The value of true protein in milk is calculated as the sum of the value of true protein in the cheese plus the true protein in the whey.

25

The weight of true protein in the cheese, the

2.2861 pounds, divided by the weight of true protein in the milk multiplied by the true protein value in the cheese, the \$2.9498 per pound, that plus the weight of true protein in the whey, that is the 0.7054, divided by the true protein in the milk multiplied by the value of true protein per pound in the dry whey equals the value per pound of true protein in the milk.

8 So what this has done is established a value for 9 true protein in whey which is different than the value of 10 true protein in cheese and calculated a final value of 11 \$2.2994 per pound of true protein as the single value of 12 true protein in the milk for Class III.

13 Step 3, in step 3, it is the calculation of the other solids value. The method of calculation of the other 14 15 solids value is also different than the current system used. 16 First, the yield, 6.2728 pounds of whey powder and the 17 calculations as described earlier in the description of the 18 values in Table 1, is multiplied by the price per pound of 19 whey powder. This provides the total dollar value of the 20 whey powder produced per hundred-weight of milk.

Second, the manufacturing cost per pound, the \$0.137 per pound of whey powder multiplied by the yield of whey powder is equal to \$0.8594. And this is subtracted from the total value of the whey powder which was \$1.20. This provides a net value of \$0.3431 of whey powder after

1 removal of the manufacturing cost.

2	The value of protein in the whey powder was
3	previously assigned in step 2 above. And the value per
4	pound of whey powder in terms of its price is \$0.1917. This
5	is multiplied by the weight of true protein in the whey
6	powder to give a total value of \$0.1352. That is the value
7	of the true protein in the whey powder which is subtracted
8	from the net value after removal of the manufacturing costs
9	which was the \$0.3431.
10	This provides a residual value in the whey powder
11	for other solids of \$0.2079. This residual value of the
12	other solids is divided by the original pounds of the other
13	solids in the milk to give the value per pound of other
14	solids at \$0.0365 per pound.
15	The values per pound of each component, fat, true
16	protein and other solids, calculated in steps 1, 2 and 3
17	provide the values used to calculate the Class III price for
18	milk of any composition in that month. A calculation of net
19	return to the cheese-maker for milk with 3.5 percent fat,
20	2.9915 percent protein and 5.6935 percent other solids is
21	also shown in my example. And that is shown on page 15 in
22	the first column of that copy of a spreadsheet on page 15.
23	The purpose of showing the calculation of net
24	returns to a cheese-maker is to ensure that the new system
25	is working correctly. When the calculation of fat, protein

and other solids prices is working correctly, it produces a
 net revenue of zero when the Class III price is calculated.

The net revenues on milks of other compositions other than the milk composition used in the calculation of the fat, true protein and other solids prices will not be zero. This will be explained later.

7 This calculation rounded to two decimal places --8 and this is the calculation shown in column 1 on page 15 in 9 this document -- arrives at a Class III price at 3.5 percent 10 fat, 2.9915 percent true protein and 5.6935 percent other 11 solids or \$11.66 while the current system arrives at a 12 uniform price of \$11.51 using the March 1999 data and the 13 same default assumptions.

14 The difference between the current Class III 15 prices and the system that I have proposed in this 16 presentation will vary from month to month when using all 17 the same default values. But for the most part, on average, 18 they will track about the same.

Thus the two calculations produce a similar Class III milk price when the same assumptions are used in both the proposed and the current methods of calculation. I will leave it to others to calculate the comparison of Class III prices under the current system and my proposed calculation across the period of time using different monthly prices. At a fat test of 3.67 percent, the -- that would

be with a 3.1 percent true protein and a 5.9 percent other solids in the skim milk portion -- the current system produces a Class III price of \$11.74 per hundred-weight while the proposed new calculation produces a price of \$11.88 per hundred-weight.

6 The difference between the current system and the 7 system I have proposed at 3.67 percent fat is smaller than 8 the difference at the 3.5 percent fat. This is caused by 9 the fact that the price per pound of fat in the current 10 system is \$1.4487 per pound. And it is higher than the 11 price per pound of fat, the \$1.3064 in the calculation that 12 I have proposed when using the March '99 data.

13 This relationship will vary from month to month. 14 When the data from other months are used for the 15 calculation, this relationship between the two methods of 16 calculation will change because in the current system of 17 calculation, the variation in butterfat price used in the 18 Class III calculation is not determined by and does not vary 19 in direct proportion to variation in the cheese price.

20 An important point is that the system that I have 21 proposed will -- and I underscore -- reduce volatility in 22 protein and fat prices compared to the current system. The 23 new system solves the problem described earlier in the 24 current system as it will not produce a reduction in protein 25 price per pound and skim value when fat value increases. 1 The fat and protein prices for Class III will move 2 together with cheese price. The sensitivity analysis 3 presented in the next section will provide an evaluation of 4 the default values that have been assumed in both methods of 5 calculation. And a copy of the spreadsheet used for the 6 calculations has been provided.

7 At the top of page 17 -- 15 and 16 contain the 8 calculation spreadsheet. And we will come back to that and 9 refer to the other columns and other information that is 10 contained on that later in the text. Next, I would like to 11 go through the sensitivity analysis to the factors included 12 in the Class III price calculation that I have presented.

13 When the uniform price is calculated for Class III 14 milk at 3.5 percent milk fat, 2.9915 percent true protein 15 and 5.6935 solids and other -- other solids, the uniform 3.5 16 percent fat milk price is established in dollars per 17 hundred-weight and a value of a pound of fat, a pound of 18 true protein and a pound of other solids are established for 19 the time period based on the NASS cheddar cheese price and 20 the NASS dry whey price.

The Van Slyke theoretical cheese yield equation is used in these calculations. The Van Slyke formula was designed for full fat cheddar cheese with a moisture of about 36 to 37 percent. Other cheese yield equations are available that have been optimized to work with other cheese

1 varieties and under conditions of milk fortification. And 2 those are described in more detail in reference number 2. 3 The factors that influence the calculated Class 4 III price and the values of fat, true protein and other 5 solids, that is values in price per pound, can be separated into three different categories. Category number 1 is б 7 technical factors in the Van Slyke yield equation that influence the calculation of the protein value in the 8 9 cheese. Category number 2 is the make allowances and 10 category 3 is the NASS cheese and whey prices. 11 Once the Class III value for a pound of each of 12 the components is determined, then the Class III price for 13 any milk can be calculated. In this sensitivity analysis, I 14 look at the sensitivity of milk price to changes in various 15 factors in prices. A comparison of the sensitivity of the 16 Class III price to variation for different parameters may

17 help direct the attention of the industry to those that are 18 the most important and avoid too much time being spent on 19 factors that have little impact.

Technical factors in the cheese yield equation and the calculation of protein price. The Van Slyke cheddar cheese yield is used for calculations in the current Class III milk pricing system. And I have used the same formula in the system described in this presentation. A review of the cheese yield formulas have been presented elsewhere in

1 the previous part of this presentation.

2 The Van Slyke theoretical cheddar cheese yield 3 formula is as follows: The cheese yield equals 0.93 times 4 the percent fat plus the casein minus 0.1 times 0.109 5 divided by 1 minus the target moisture divided by 100. The casein content of milk is not as easily measured as the fat б 7 content of milk. However, in recent times, both the crude 8 protein and more recently true protein content of milk have 9 been routinely measured with both chemical reference methods 10 and electronic milk testing equipment.

11 It has been common industry practice to use a 12 factor multiplied by crude protein content of milk to 13 estimate casein content. The most commonly used factor 14 seems to be 0.78 times crude protein. However, the average 15 value for the U.S. milk supply is probably between 0.77 and 16 0.78.

17 In a national milk composition study that I 18 conducted in 1984 for the U.S. milk supply, and it is in 19 reference 3, the average casein as a percentage of crude 20 protein was 77.93 percent. The average casein as a 21 percentage of true protein was 81.95 percent.

At the time of the 1984 study, the current official AOAC methods for casein and non-protein nitrogen were not in place. And the methodology was a little different than that used in a more recent study. Since 1992, my laboratory has monitored the casein as a percentage
 of crude and true protein for milk from several factories
 that participated in the 1984 study.

I have seen no trend for a decrease in casein as a percentage of true protein in these milk supplies. If anything, there has been a slight tendency for casein as a percentage of protein to increase. This increase has probably been due to the attention that has been focused on improving milk quality, for example, reducing psychotrophic bacteria counts and somatic cell count for cheese-making.

11 Improvement in these quality parameters for milk 12 supply would tend to increase the casein as a percentage of protein because of reduced enzymatic damage to casein. More 13 14 recently, my laboratory has monitored the casein as a 15 percentage of true protein in bulk milk supplies in New York 16 State at three large cheese factories. These data were 17 reported in October of 1999 at the Cornell University Animal 18 Nutrition Conference. And the publication of those results 19 is cited as reference number 4.

Test values reported for the 1992 to 1998 period below were determined using the official AOAC Keldall methods that are in place today. And those methods are described in reference 5, reference 6 and reference 7 at the end of this paper. Composite monthly raw silo milk samples were tested on a monthly basis for crude protein, true protein, non-protein nitrogen and casein for each factory
 from 1992 to 1998.

Over that seven-year period, the average nonprotein nitrogen content of the milk was 0.192 percent on a protein equivalent basis. The average annual casein as a percentage of true protein for the milk supplies in these three factories was 82.17, 82.17, 82.42, 82.15, 82.12, 82.31 and 82.19 for a seven-year average of 82.22 percent casein as a percentage of true protein.

10 The influence of the selection of constants for 11 use in the Van Slyke cheese yield equation for fat recovery 12 in the cheese, the nonfat, non-casein solids retention 13 factor in the cheese, moisture content of the cheese and 14 casein as a percentage of true protein in the milk on the 15 calculated Class III uniform price and net returns to a 16 cheese-maker are shown in Table 2 which is on page 27 of 17 this document.

18 Table 2 on page 27 is entitled, "Sensitivity 19 Analysis, Van Slyke Yield Equation Parameters Using March 20 1999 Data and Current Default Assumptions." First, fat recovery in the cheese. As expected, fat recovery in 21 22 cheddar cheese is used as an input value in the Van Slyke 23 cheese yield formula. The current pricing system uses a value of 90 percent fat recovery in the cheese for 24 25 calculation of the base price.

As shown in Table 2, an increase in fat recovery value assumption of 1 percent causes an increase in Class III milk price of 0.024 dollars. Fat recovery in the cheese is a parameter in cheese-making that the cheese industry monitors closely.

б In many factories, the fat content of whey as it 7 is being removed from the cheese vat is determined as an index of fat loss. A value of 93 percent fat recovery in 8 9 the cheese is achievable at a commercial level. However, 10 not all factories achieve this. Recent advances in design 11 of large-scale, enclosed cheese vats have been able to 12 achieve fat recoveries in cheese that approach 93 percent. 13 The value of 90 percent fat recovery in the cheese 14 is probably low for large-scale, modern cheese factories. 15 In my opinion, the most appropriate value to use as a 16 default value currently is between 90 and 93 percent. As 17 technology of cheese-making continues to advance, these

18 values may change and they may need to be re-evaluated 19 periodically.

20 Second, the nonfat, non-casein solids recovery 21 factor. And that is also shown in Table 2, the sensitivity 22 analysis. The 1.09 factor in the Van Slyke equation assumes 23 that there will be 1.7 percent solid in the cheese and that 24 some nonfat, non-casein milk solids, i.e. other milk solids, 25 will be retained in the cheese.

1	The current pricing system uses a 1.09 factor.
2	And that value has been used traditionally for cheddar
3	cheese that contains about 36 to 37 percent moisture. This
4	value is used in the current Class III price calculation.
5	As can be seen from Table 2 on page 27, the calculated Class
6	III milk price is sensitive to this coefficient in the
7	equation. A change of 0.01 in this coefficient causes the
8	milk price to change by \$0.0966 per pound excuse me,
9	dollars per hundred-weight.
10	In my opinion, the value of 1.09 is a good value
11	for cheddar cheese that contains about 36 to 37 percent
12	moisture and 1.7 percent solid. Given a constant solid
13	content of 1.7 percent, the true value of the 1.09 factor
14	will increase with increasing moisture content of the
15	cheese. This happens because there are other milk solids
16	dissolved in the free moisture portion of the cheese. And
17	as moisture content of the cheese increases, so does the
18	nonfat, non-casein milk solids content of the cheese.
19	The actual moisture content of barrel cheese
20	reported in the survey is usually between 35 and 36 percent
21	moisture. The moisture content of the block cheese reported
22	in the NASS survey must be greater than 36.5 percent. Thus,
23	in my opinion, the 1.09 factor is probably close enough
24	given the importance of some other factors that will be
25	discussed.

1	Sensitivity analysis for moisture content of the
2	cheese. A value for the target moisture content of the
3	cheese is used in the cheese yield calculation. Cheese
4	yield is very sensitive to moisture content, with cheese
5	yield increasing with increasing moisture. Therefore, one
6	would expect a change in the assumption for cheese moisture
7	content in the Class III price calculation to have a large
8	influence on the milk price.
9	As seen from Table 2, an increase in moisture
10	content of 1 percent causes a \$0.1608 per hundred-weight
11	increase in the milk price. The cheddar cheese moisture
12	assumption in the current Class III price system is 38
13	percent. And I have used that value as an assumed value in
14	my proposed default price calculation.
15	However, the most important point is that the
16	value assumed in this calculation and the moisture value for
17	the cheese and the price for the cheese included in the NASS
18	survey must match. Unfortunately, only the moisture content
19	of barrel cheese is included barrel cheese included in
20	the NASS survey is known currently.
21	I think the dairy industry would be better served
22	if the moisture content of all cheese in the survey was
23	reported and a cheese price calculated at moisture content
24	that is the same for both the NASS moisture adjustment and
25	the Class III yield formula calculation.

1 The sensitivity analysis in Table 2 uses a 2 constant cheese price for all moisture contents, therefore, 3 shows a significant variation in milk price. The magnitude 4 of milk price changes shown in Table 2 actually demonstrate 5 what happens to milk price when the moisture content of the 6 cheese included in the NASS survey does not match the 7 assumed value used in the cheese yield formula.

8 However, as I explained earlier in this report, 9 the true average of 39 percent moisture-adjusted barrel 10 cheese and the block cheese of unknown moisture content is 11 probably near 38 percent. And, therefore, under the current 12 price calculation, the moisture-adjusted cheese price and 13 the mean moisture-adjusted basis for the cheese in the NASS survey and the cheese moisture assumption of Class III seem 14 15 to be comparable at about 38 percent.

Next, the casein as a percentage of true protein. Next, the casein as a percentage of true protein. The current Class III pricing system used 75 percent of protein as casein to arrive at the protein factor. This is equivalent to a 79.76 percent of true protein. Second, this value of 75 percent of crude protein is in my opinion too low.

In the past several years, I have been approached by cheese-makers that have been concerned that the casein as a percentage of either crude or true protein is lower than normal. In every case that I have been involved with, the low values have been traced to improper methodology for
 measuring casein or poor handling of milk samples during
 collection and the time immediately prior to analysis.

A paper on the proper handling of milk samples for casein analysis and the description of the chemical methods for casein analysis is given in the reference list and it is reference number 7.

8 Typically, a value such as 0.78 time crude protein 9 in milk has been used in the cheese yield equation as a 10 substitute for casein percentage. In Table 2, I have shown 11 values for 75 to 79 percent of crude protein -- this is at 12 the bottom of Table 2 on page 27 -- and the corresponding 13 values for casein as a percentage of true protein.

The value of 0.78 on a crude protein basis is almost equivalent to a 0.83 on a true protein basis as shown in Table 2. As the default value for casein as a percentage of true protein is increased, the Class III milk price increases. The milk value increases by \$0.0616 per hundredweight for every 1 percent increase in casein as a

20 percentage of crude protein.

The value would be slightly larger on a true protein basis. In my opinion, a value of 82.2 to 82.4 for casein as a percentage of true protein is probably a correct value for this parameter. This is quite different than the assumption in the current price calculation that was used to derive the protein factor. And I am referring to the 1.32
 protein factor that then was updated to a true protein basis
 or 1.405.

4 Cheese and dry whey make allowances. The 5 calculated Class III price in the current milk pricing 6 system and the Class III price calculation proposed in this 7 document are both sensitive to the make allowances selected 8 as default values. The sensitivity of the Class III price 9 in the system that I have described is shown in Table 3. 10 And that is on page 28 of this document.

11 As make allowance for cheese changes by 0.01 or 12 one cent per pound of cheese, the milk price of 3.5 percent 13 fat will change by \$0.0956 per hundred-weight or 9.56 cents 14 per hundred-weight. While cheese manufacturing costs is a 15 very important parameter, it changes with changing economic 16 conditions, scale of production and advances in technology. 17 Therefore, surveys and collection of actual data are probably the best approaches to keep this assumed value 18 19 current and realistic with conditions in industry.

20 Whey. The make allowance for dry whey is also an 21 important component of the Class III milk price in the 22 current Class III pricing system and the one that I have 23 proposed. As the make allowance for whey increases, the 24 milk price paid to a farmer decreases.

25

As make allowance changes by one cent per pound of

whey powder, the Class III milk price changes by 6.27 cents per hundred-weight in the Class III price calculation that I have proposed when all other assumptions are the same as the current system.

5 The NASS cheese and whey prices. The Class III 6 milk price is extremely sensitive to change in cheddar 7 cheese price as it should be. As can be seen from Table 4 8 on page 29, an increase in cheese price of ten cents per 9 pound will increase the Class III milk price by 99.07 cents 10 per pound -- per hundred-weight.

Since the value for fat in Class III is determined directly by the cheese price in the approach that I have presented, it eliminates the decrease in Class III milk price that producers with a fat-to-protein ratio less than 1.28 when the fat value in Class III decreases. Thus, changes in the cheese price will clearly drive changes in Class III milk price.

18 The accuracy -- and this is in bold -- the 19 accuracy and representativeness of the NASS cheese price is 20 critical. Also, the harmonization of the cheese price and 21 the moisture basis in the yield calculations are extremely 22 important.

23 The pay price to a farmer at constant milk
24 composition will increase when cheese price increases and
25 decrease when cheese price decreases. The calculated Class

III milk price using the calculations that I have proposed
 and in the current calculation is the most sensitive to
 change in cheese prices.

Therefore, big changes in cheese prices in the marketplace will drive big changes in milk price both in the system that I have proposed and as it has done in the past. However, changes in fat value in other milk utilization classes will not cause skim value to change in the Class III price calculation that I have proposed.

10 Whey prices. While not as important as cheese 11 price, the whey price does influence milk price in this 12 system. In the calculation that I have proposed, the whey 13 price directly influences the value of true protein from 14 milk that goes into whey. As can be seen in Table 4 on page 15 29, an increase of one cent per pound in the whey price will 16 increase the milk price by 6.27 pounds per hundred-weight.

17 On page 21, calculation of milk prices in the 18 proposed system and the current system questioning some of 19 the defaults. I am on page 21 of the document. As 20 mentioned earlier, the two methods of price calculation, 21 that is the current and the one I have presented, return 22 similar total Class III milk prices when they start with the 23 same assumptions.

However, the two systems arrive at different fatand protein values. The system I have proposed eliminates

the decrease in milk protein and skim price when the fat price goes up and vice versa. In my opinion, some of the default assumptions need to be evaluated from a technical basis for their correctness.

5 Changes in these default values will cause the б same direction of Class III price change in both the current 7 system of milk pricing and the system I have proposed. To 8 illustrate these changes in default values that I think need 9 to be evaluated, I will present five columns of data in the 10 form of a spreadsheet. And this is shown on pages 15 and 16 11 and the calculations on the spreadsheet that illustrate the 12 impact of the default values selected for each parameter.

Looking at page 15 and the first column of data, the first column of data on page 15 and following on to page 15 16 in the first column, those go together. This data reflects the current default values as used in the current Class III milk price calculation, but calculating it using the approach that I have described.

Some of the default values were used as the basis for the derivation of the protein and fat factors in the current system. So they are part of the assumptions even though they may not be visible in the routine calculation each month in the current pricing system.

24 What that means is that the 1.405 and the 1.582 25 have a number of default factor assumptions built into their

calculation. And this is staying consistent with those
 underlying defaults.

The calculation of milk price using the March 1999 data using my price calculation produces a milk price of \$11.66 per hundred-weight for a milk with 3.5 percent fat. And that is in the first column going down towards the bottom, total Class III price at 3.5 percent fat, dollars per hundred-weight, and it rounds to the \$11.66.

9 This is 15 cents higher than the price calculated 10 using the current system for the March '99 data. As 11 mentioned earlier, this difference between the two 12 calculations will vary from month to month. And other 13 people are calculating those relationships.

The second column on the sheet. The second column 14 15 of assumptions and data represents the outcome of a change 16 in the assumption for cheese moisture and cheese price that 17 corresponds to that moisture content. In the same fashion 18 as NASS does when they calculate a moisture adjustment of 19 barrel cheese composition and price from a level of 34 to 35 20 percent, that is its actual moisture or the cheese's actual moisture at production, mathematically adjusting that to a 21 22 39 percent. I have adjusted the yield and the price per 23 pound of cheese back down to a 36 percent basis.

24 The 36 is not a magic number. I have just taken 25 that as an example. In reality, the cheese was never made

1 at 39 percent moisture and never had as high a cheese yield 2 as indicated in the first column. And that would be the 3 yield where we have the 9.5571 cheese yield at 38 percent 4 moisture. The cheese was not made at 38 percent moisture.

5 By raising the moisture content to 39 percent and 6 lowering the price per pound of cheese, the fixed cheese 7 make allowance of \$0.1702 per pound is subtracted from a 8 lower cheese price. In my opinion, this results in too much 9 make allowance being subtracted off the cheese price.

10 I have lowered the assumption for the moisture 11 content of the cheese from 38 percent to 36 percent moisture 12 and adjusted the price per pound of cheese upward from the \$1.3064 per pound reported by NASS to what it would be if 13 14 the cheese was 36 percent moisture, that is, \$1.3485 per 15 pound, to reflect the higher value per pound of cheese at 16 the lower moisture. And then I have recalculated the Class 17 III price in that second column.

18 The price per pound of cheese at \$1.3485 is closer 19 to the price that was reported in the NASS survey before the 20 moisture adjustment than the price that is used in column 1. 21 To what may be the surprise of some individuals, this change 22 in assumption at the point of calculation of per-pound 23 values for protein and other solids produces a higher Class 24 III milk price, not a lower price.

25 The calculated Class III price increases from

1 \$11.6591 to \$11.7240 or about 6.49 cents per hundred-weight. 2 If one goes back to the current pricing system and makes the 3 same changes to moisture for use in the calculation of fat 4 and protein factors, this makes the same moisture adjustment 5 to cheese price. The Class III milk price also increases. б Since barrel cheese was never made at the 39 7 percent moisture, I see no basis for adjusting the moisture 8 up to 39 percent and the price per pound of cheese down. 9 This inflates the cheese yield to a value that never existed 10 and then allows for a make allowance based on a higher yield 11 of cheese. 12 At the bottom of the page for all of these 13 columns, you will notice that it calculates the total 14 returns which is the value of the cheese, the whey and whey 15 cream, and subtracts from that the make allowance and looks 16 at the net return showing as zero. And this was mentioned 17 previously, that in all of these calculations, this nets out

18 to zero.

19 The third column which at the top is entitled, 20 "Change Casein Percentage of True Protein, Adjust Cheese 21 Moisture to 36, Adjust Cheese Price to 36", what we are 22 doing -- or what I am doing is making incremental changes as 23 we go from left to right. So these are building one on top 24 of each other in terms of the changes. But you can see the 25 net difference in the calculated Class III price as I look

1 at each one of these factors.

2 Column 3, the third column demonstrates the impact 3 of changing the casein as a percentage of true protein to a 4 value that is more representative of the true value in the 5 milk supply. The original value of 75 percent of crude б protein, that is 79.76 percent of true protein, is not 7 consistent with the normal values found in the milk supply when fresh milk is analyzed by the official reference 8 9 methods for true protein and casein analysis as described in 10 reference 7.

The data referenced earlier in this presentation 11 12 has demonstrated that a more appropriate assumption for this 13 value is about 82.2 percent true protein -- of true protein 14 as casein. If this assumption is used in the proposed new 15 calculation system -- this is the third column; that is the 16 only thing that changes in that column compared to the 17 second column -- it produces a milk price of \$11.8664 when 18 coupled with the previous change in moisture basis from a 38 to a 36. 19

The price increase due to this change in assumption would be about 14.24 cents per hundred-weight. If this same change in assumption for casein as a percentage of true protein is used to recalculate the protein and fat factors in the current system, the milk price under the current system will also increase like I have shown here. 1 The fourth column, it is entitled, "Change in Fat 2 Recovery From 0.90 to 0.915." This is the factor used in 3 the Van Slyke equation for fat retention in the cheese. The 4 fourth column demonstrates that the impact -- the impact of 5 changing the assumption for fat recovery in the cheese from 6 90 to 91.5 percent.

7 This change produces a higher Class III calculated 8 price in both the current system of price calculation and 9 will produce a price increase in the new system. The price 10 change is about 3.44 cents per hundred-weight due to this 11 change. A value of 91.5 percent fat recovery in the cheese 12 may be more representative of fat recovery performance in 13 modern, well-managed cheese plants. Some factories will 14 perform better than this. Some will perform worse.

The fifth column, it is entitled, "Change to the Average U.S. Milk Composition as the Base for Calculating the Price Per Pound of Fat, Protein and Other Solids." The fifth column deals with the issue of the selection of the milk composition at which to calculate the per pound values of fat, true protein and other solids.

In my opinion, the milk composition used for this calculation should represent the average of the raw milk supply as it would be received at cheese factories. An estimate of this average is 3.67 percent fat, 2.9862 percent true protein and 5.6835 percent other solids.

1 Protein and other solids are based on the 3.1 2 percent true protein and 5.9 percent other solids in the 3 skim portion. This estimate is taken only for the purpose 4 of example. A determination of the average milk composition 5 should be used as the base. 6 When the previous changes in assumptions are used 7 with this milk composition, the calculated Class III price 8 is \$12.22 per hundred-weight versus in the previous column, 9 column 4, \$11.90 per hundred-weight. That price was at 3.5 10 fat. The other one is determined at 3.67. 11 The key point is that the calculated price per 12 pound of fat and other solids are unchanged by this 13 difference in selection of the default milk composition. 14 However, the price per pound of protein increases by 3.56 15 cents per pound. 16 So in this approach, what you choose as the base 17 milk composition is important. What is the important -what is important about selection of a milk composition for 18 calculation of this price? The milk composition selected 19 20 becomes the "pivot point" for net revenues for the cheese-21 maker. 22 And by pivot point and net revenues, I direct you 23 to the bottom of that column 5 where there is the total returns of \$14.72 is the value of cheese, whey and whey 24

25 cream from that milk. Below it is the make allowance, the

1 yield times the make allowance for the cheese, for the whey. 2 And when those are subtracted out, the milk price and that 3 total return become the same value. A milk -- so this is what I would refer to as the 4 5 pivot point for net returns for the cheese-maker. That б means that we are at a net or zero. A milk composition 7 lower than average will produce a negative net return for 8 the cheese-maker relative to the pivot point composition. 9 And a milk composition with a higher-than-average 10 composition will produce a positive net return. 11 If the processor's cheese-making performance meets 12 the assumptions in the calculation of the price, all those 13 assumptions that we have talked about previously, placing 14 the pivot point of net return at the average milk 15 composition for the milk supply still gives the cheese-maker 16 the incentive to buy higher solids milks to improve 17 profitability as is the case in the current system. 18 With respect to the ratio of fat-to-true protein, 19 the cheese-maker will have a positive net revenue with the 20 fat-to-true protein ratio is higher than the average of the milk supply. If the fat is too low for the amount of 21 22 protein in the milk, then the cheese-maker will have an 23 incentive to add cream to maintain the level of fat on a dry basis in the cheese that is as high as is realistic with 24

respect to the quality of full fat cheddar cheese.

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1 This is not different than the signal in the 2 current system. This demonstrates changes in net revenue 3 behaviors resulting from milk pricing that happen both in 4 the current Federal Order System and in the new system of 5 calculation I have proposed.

б If the composition of a producer's milk is higher 7 than those assumed for the milk in the Class III protein 8 value calculation, then a cheese-maker will get a higher net 9 return on that milk. On the other hand, if a milk -- if the 10 milk from a producer has a milk composition lower than the 11 assumptions in Class III calculation, then this producer's 12 milk will cause a lower net return for the cheese-maker than 13 predicted in the calculation.

14 Again, this is not different than what is 15 happening in the current system. The slope of these 16 relationships are fairly steep. And the slope will be 17 influenced by the absolute level of the cheese price. Also, 18 if a cheese factory happens to have a milk supply that is 19 lower in composition than their competitor, then they have a 20 built-in disadvantage of net return even though their milk 21 price was lower.

This would indicate that these pricing approaches over-pay producers with milk composition below the Class III milk composition assumptions used to calculate protein and other solids values and under-pay producers that have milk 1

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compositions that are higher than the Class III milk composition assumptions.

3 Both the current Class III system and the new 4 Class III price calculation I have proposed that calculates 5 a fixed price per pound of protein do not address this б issue. That is both systems do not address this issue. 7 Thus, end product pricing would correct this problem and 8 would deliver payments to each producer that would be linked 9 and respond directly to the value of cheese and whey that 10 could be produced from that producer's milk.

11 At the bottom of page 23, I am starting on the 12 section that says, "Milk Price Calculator." This is 13 referring to the five columns to the right of the table --14 at the right side of the table on page 15. And this is in 15 the spreadsheet and can be used as a calculator. I have 16 included a milk price calculator in the spreadsheet. It 17 uses fat, true protein and other solid prices per pound that 18 were determined in the calculation done in column 5.

19 I have shown the calculated milk price for five 20 different milk compositions. And those compositions are 21 listed in the lines at the top of those columns. In 22 addition, I have shown the total returns from cheese plus 23 dry whey plus whey cream. I have not deducted make 24 allowance from these returns.

The -- at the bottom, it shows a net return across
1 the five columns before you subtract out make allowance. 2 The make allowances are used in the calculation of milk 3 price and should represent the make costs and some return to 4 the cheese-maker at the milk composition used to calculate 5 the values of a pound of fat, true protein and other solids. б As discussed earlier, since most of the costs in 7 the make allowance are in reality fixed with respect to 8 volume of milk processed and do not vary with yield of 9 cheese and yield of whey product, it is not meaningful to 10 calculate a different cheese and whey powder make cost for 11 each of the different milk compositions. 12 The total revenues per hundred-weight of the milk 13 processed for the cheese-maker increase or decrease 14 respectively as the milk component concentrations increase 15 and decrease. To maximize the total return on the milk to 16 make cheese, the cheddar cheese-maker must control casein-17 to-fat ratio in the vat. This is no different than under 18 the current pricing system. 19 Ideas for the future as the dairy industry 20 continues to adapt new technologies. It is possible 21 mathematically to keep net returns to the cheese-maker 22 constant across all milk compositions without producing 23 decreasing skim value when fat values increase as it occurs now in the current milk pricing system. 24

25 However, the approach that would be used to

achieve this would calculate a protein value for each milk instead of calculating a fixed protein price per pound that is applied uniformly to milk from all producers. The disadvantage of this approach is that it would be harder for producers to understand unless the price calculation was converted to a cheese yield and whey powder yield basis to communicate to the farmer.

8 If this was done, it would be very easy for a 9 farmer and the cheese industry to understand the milk price. 10 An approach that would keep net returns to the processor 11 constant given a constant make allowance in dollars per 12 pound of product, that is, cheese and whey on each 13 producer's milk, would increase the difference in milk price 14 between milks that have low versus high protein and fat 15 contents.

This approach would also more correctly return to each farmer the true value of that milk in Class III. An approach to pricing that holds net revenues for the cheesemaker constant on all milk compositions would also put cheese companies that happen to have different average composition in their milk supplies on a more equal playing field.

23 The cheese factories receiving a milk with a 24 higher concentration of fat would still have some 25 competitive advantages with respect to manufacturing

efficiency. But the competitive advantages for that cheese manufacturer that are created by the pricing system would be eliminated. Cheese factories that have lower manufacturing costs per pound of product would still have competitive advantages over those having higher manufacturing costs.

б The interface of this approach for Class III 7 pricing with other classes would be problematic unless the 8 value of components are more completely reflected in other 9 products. A discussion of this topic is outside the scope 10 of this hearing. And dairy product manufacturing industry 11 is not at this level yet, but may be some day. At this 12 time, many of the limitations in the current pricing --13 current system of milk pricing calculations will be more 14 easily resolved.

15 Conclusions: 1) The current milk pricing system 16 produces a decrease in protein and skim value as milk fat 17 value used in the current Class III calculation increases. 18 This results in abnormally high protein prices and skim milk 19 price to cheese-makers when fat value is low and the 20 reverse, when milk fat prices are high.

This produces decreasing milk price to producers with a fat-to-true protein ratio of less than 1.28 when fat value goes up. This causes higher volatility in the milk protein price than there should be. And it sends a confusing price signal to most producers.

1 In my opinion, the automatic decrease in protein 2 value with increasing fat value for a processor with a --3 for a producer with a fat-to-protein ratio of less than 1.28 4 that happens in the current Class III price calculation 5 needs to be eliminated. And one way to do this is by б changing the method of the Class III price calculation. 7 Conclusion number 2) The method that I have 8 proposed to calculate Class III relies on the same 9 foundation of the Van Slyke cheese yield formula as the 10 current system when using the same assumptions as the 11 current system. The proposed method returns a milk price 12 that is 15 cents per hundred-weight higher at 3.5 percent 13 fat for the March 1999 data than the current system. 14 This difference will vary from month to month. Τn 15 my opinion, the system of Class III price calculation that I 16 have proposed would reduce volatility of protein prices. It 17 would establish a fat value in Class III that is tied 18 directly to the NASS cheese price. And it would eliminate 19 the Class III milk price behavior of decreasing protein 20 values caused by increased fat values that sends a confusing 21 price signal to producers in the current system. 22 Number 3) the parameters used as default values 23 for the NASS cheese price and moisture adjustment should be re-evaluated. The values for the NASS cheese price and 24 25 moisture that are used in cheese yield calculation to

determine true protein price should reflect the average
 composition of the cheese as it is made, not a 39 percent
 moisture.

4 This will allow a more correct make allowance 5 adjustment. In my opinion, the cheese price used in the 6 Class III price should be a price per pound of cheese at a 7 moisture test that more closely represents the actual 8 moisture at which the cheese was produced. And that same 9 moisture assumption should be used in the cheese yield 10 formula for the price calculation.

11 Number 4) The default assumption used in the 12 current price formula for casein as a percentage of crude 13 protein of 75 percent which equates to a value of 79.76 on a 14 true protein basis is too low. In my opinion, the best 15 analytical data at the present time would indicate that a 16 more correct value for the assumption of casein as a 17 percentage of true protein is approximately 82.2 percent. 18 Number 5) The default assumption for fat recovery 19 in cheese of 90 percent is low in relation to average cheese 20 industry performance using average modern cheese-making technology. In my opinion, a more representative average 21 22 value for large modern cheese factories would be 91.5 23 percent. Some factories have higher fat recovery in cheese than this. Others have lower. 24

25 Number 6) In my opinion, the default milk

1 composition which the protein and other solids prices per 2 pound are calculated in the Class III price calculation 3 method that I propose should represent a milk composition 4 that is the average milk composition with respect to fat, 5 true protein and other solids content present in the milk б supply used by cheese-makers. 7 JUDGE HUNT: Does that conclude your testimony, 8 Doctor? THE WITNESS: No, it does not. 9 10 JUDGE HUNT: We will take a break now. 11 Incidently, we will be going until 6:00 tonight. And there 12 is a possibility we will be going even later tomorrow 13 evening. And we will start again tomorrow at 8:00 in the morning. And we will take a break now. Be back in ten 14 15 minutes. 16 (Whereupon, a brief recess was taken.) 17 JUDGE HUNT: All right. Back on the record. Dr. 18 Christ -- or, I mean, excuse me, Dr. Barbano. THE WITNESS: Thank you. Next, the -- on the 19 20 website, this Excel spreadsheet, the one I am showing you on the screen, is exactly the same spreadsheet that is 21 22 currently on the website and can be downloaded. If anyone 23 would like a disk copy of this spreadsheet, it is available. And I would give it to anyone. 24

25 There is a couple of things -- this is all -- this

is merely what is on page 15 and 16. But there is a couple 1 2 of key things that I would like to bring to your attention 3 in terms of things that show the problem that I see. 4 And one of the issues when you go down the first 5 column and you come up with the price at 3.5 of the \$11.6591 or \$11.66, that in the current milk pricing system, using б 7 the March data -- and this is using the March data -- the 8 other key thing in this is it is using what I take is the 9 same assumptions as the March data -- that this calculates 10 the \$11.66. The current pricing system would calculate 11 \$11.51 as the milk price. 12 Given an \$11.51 milk price, there is a 15 cents --13 if we put \$11.51 here, this would change to 15 cents a 14 hundred-weight net revenue. So, in other words, if I take 15 the total returns, this is the cheese -- the yield of cheese 16 times the price per pound of cheese, the yield of whey 17 powder times the price per pound of whey powder, the 18 expected yield of whey cream times the value of fat in whey 19 cream, you come up with a total value of the products and 20 byproducts that would be made from a hundred-weight of this 21 milk.

And from that, taking the yield times the make allowance for the cheese, I calculate a dollar value in terms of make allowance and the same thing for whey powder. In my calculation system then at \$11.65, if we take that

value and compare it to this total returns minus the allowed make allowances, the net is zero. In other words, if the value didn't go to the cheese-maker in the allowances, it goes to the producer.

5 The current system would calculate at \$11.51. My б conclusion is there is 15 cents they are missing that didn't 7 go to the producer. This is using the 0.75 for casein. 8 If -- and this is the nice thing about the spreadsheet -- I 9 have been told that the assumption is 0.78, not 0.75. Okay. 10 Then let me change the assumption and in my 11 calculation come up with a price if we are using 78 percent 12 of casein as a percent of crude protein. When I do that, 13 the price -- that \$11.51 in the current system won't change. That is the price. That supposedly was using 78. Also, the 14 15 yields of the products and the prices of those products 16 aren't going to change -- actually, the yield of the product 17 is going to go up, the yield of cheese because the 78 18 percent casein, the yield is going to go up.

So the net returns to the cheese-maker will go up also because there is going to be more cheese yielded out of that. And that will calculate in this. So when you change that value to 0.78 and we come down the column, the pay price now to the producer has increased to \$11.84 from the \$11.66.

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The return to the cheese-maker has increased to --

the total returns to \$14.34. We have backed out the make 1 2 allowance to net this to zero. The current milk pricing 3 system would price this milk at \$11.51, not \$11.84. 4 So, again, when I look at these net returns, at 5 the base milk composition, to me the net return -- if the make allowance is doing what it is supposed to, the net б 7 return should be zero at that point. And then it will be 8 positive at milk compositions in one direction and negative 9 at milk compositions in another direction. There will be a 10 pivot point.

11 But all I am saying is that at the price where we 12 are calculating the base price, that that is where 13 everything ought to be neutral. As a result, we can argue 14 back and forth about the 75 or the 78. My conclusion here 15 is that there is about 33 cents, 34 cents that disappeared. 16 And that is one of the things I feel strongly 17 about as a principle when you are calculating these things 18 is to look at the returns and balance things out to make 19 sure that everything is accounted for at the end no matter 20 how you do the calculation, with what I propose or in the current system. And everything at the base point I would 21 22 say seems -- needs to come out or should come out to zero. 23 Now, there may be other philosophies on that. But that is my personal opinion. So I just wanted to point that 24 out. And I think that tells me that there is a number of 25

1 things and as I have gone through that I feel are incorrect
2 in the factors in the current system. And this is a symptom
3 of the fact that those are incorrect.

4 Those are my comments on the spreadsheet and what 5 is on page 15 and 16 in that testimony. What I will do next б is switch to the final handout that had the graphs. And 7 this -- is it Number 17, the one with the figures? Okay. 8 The -- I worked with Craig Alexander and Mark 9 Stephenson at Cornell who I worked with them quite closely. 10 And they have all of the prices and data put together 11 already in spreadsheets. And I asked them to go through 12 with this and at least make some summaries of how the system 13 behaves and what happens in the different pricing systems. 14 In this first graph -- and this would be the first 15 one. And I am going to go through them in sequence on the -16 - the first one, this top line is the Class III price at 17 four percent fat. This one is the -- okay, this is milk 18 costs holding cheese and whey prices constant. And this is the -- this is -- he is assuming \$1.30 and 19 cents with 19 20 historic butter prices at alternative fat contents under 21 current reform pricing system.

22 So this is under the current system for four 23 percent fat milk, two percent fat milk -- or, excuse me, 24 four percent --the second line down is the 3.5 and the 25 bottom one is the two percent. And this behavior

1 illustrates the problem or the issue in terms of the effect 2 of fat price. This is months. And the issues that are 3 created in terms of the value of the skim portion versus the 4 fat portion across time by using the fat price coming from 5 outside the cheese price.

6 The second figure -- let me make sure that I --7 this is a comparison of actual basic formula prices in 8 reform Class III formula prices at 3.5 fat and at skim. And 9 this is just showing how they track across time in the 10 current system.

11 This is the protein price per pound is the top 12 line. And the key point here is to note the volatility in 13 this. The butter price per pound is the blue one, the 14 bottom line here coming up with time. And this blip in the 15 butter price is causing some of the wild swing in the 16 protein price per pound. And this line that is relatively 17 stable on this graph is the cheese price.

18 So it is showing that this volatility in protein 19 price per pound is not being created by things that are 20 happening in the price of cheese or the price of whey. This 21 is a result of the issues of using that fat value that is 22 coming from outside Class III.

23 This takes the approach -- and Craig titled this,
24 "Barbano Formula." I don't know. That is a bad idea I
25 think. But the -- what I have listed in my calculation, the

-- versus the reform current price, cheese and whey prices constant. And what this is really saying is that across time from January '94 to October '99, given the whey -- the general approach that I have taken in calculating prices, if the cheese price and the whey price were constant, the price per hundred-weight of milk would not change.

7 The pink line is showing what the price per 8 hundred-weight Class III milk actually does at constant 9 cheese price and whey price as a result of the current 10 method of calculation of the Class III price. And you get 11 these times where the price can be higher or lower as a 12 result of those fat value issues.

This is the reform Class III versus the Class III that I have calculated in terms of the basic default value assumptions. And what you see -- and it may be hard to see on the graph -- but these -- there are two lines here. They are almost right on top of each other. What this is showing is that the Class III price that I have calculated will track in net with the reform Class III price.

The difference -- if we take the skim price under the reform, you see it higher than what I have calculated. These would be based on my formula. And you see it with much more volatility than the approach that I have used in terms of keeping things more stable across time in terms of the skim value.

1 The net return to the producer is -- comes out 2 about the same in this in terms of the Class III price given 3 the same assumptions that are being used now. I talked 4 about in my presentation specific things in the assumptions 5 that I think that should be looked at very carefully and re-6 evaluated. That is a separate issue.

7 Class III fat prices under reform and Barbano's 8 fat prices and butter prices, this line here that I am 9 showing that is stable across time is moving exactly with 10 cheese prices. And that is the way I would price the fat in 11 Class III. And this other is showing that under the reform, 12 it is going to track with butter prices as it should in the 13 current pricing system.

14 This is looking at the protein. And the first 15 line starting here on the left that is the highest one, this 16 is the calculated price of protein per pound under the 17 current pricing system. And you see it coming down. And 18 then in this period around July, October, January -- July, October '88, January '99, this wild swing in protein price. 19 20 That would not happen. There would be an increase in the price that I calculate. But it would follow what the cheese 21 22 is doing. If the cheese price goes way up, the value of 23 protein, the value of fat are going to go up in locked step with it. 24

25

This is the reform price, the Class III price that

1 I have calculated and the California IVB prices at two 2 percent fat. This is dollars per hundred-weight. And this 3 is just showing how the relationship across time goes in 4 those three prices. And you can see that sometimes the 5 price for reform is the highest. My price is low. And at б other times, they reverse. So they follow the same pattern. 7 And the swings here are going to be driven by the cheese 8 price as they are in all of the systems, the big swings. 9 This is the Class III -- the -- for nonfat solids,

10 this is Class III calculated with my calculation minus the 11 Class IVB component prices. This is the nonfat solids and 12 fat solids.

And this is a calculation that Craig did saying that the Barbano nonfat solids combines the protein and other solids values. He derived a nonfat solids value from what I would have. And this is the difference between the two. Let's look at the title here. "Barbano Class III Less the California IVB Component Prices."

Actually, this graph, if you look on your handout, the file I have got open is -- differs than the one on your handout. The one on the handout is the one that you should have. And I have opened up the previous version of the file. This is the only difference between the two. What this is showing is the baseline with my

25 calculation at 3.5 percent fat. And then column 5, that is

the column 5 on the spreadsheet where it is taking all those changes and assumptions that I accumulated across the five columns and plotted that as a line across time. And you will see that that will track as the highest line. It will give a higher milk price.

7 reform price. So you will see that my baseline, trying to 8 use the same assumption as the reform, and the reform price 9 track practically on top of each other across time. There 10 is little differences, plus and minuses as I said in the 11 testimony.

And the other one, the column 5, is the accumulation of the number of things that I think should be re-evaluated. And that line comes out higher than the other. But I think the important thing is to look carefully at each one of those default assumptions that I list in those columns and look at the technical merit of each in terms of trying to get a system that is correct.

19 And that is really the focus of what I am20 presenting, is trying to bring ideas and data that provide21 technically correct information. And that is the end of my22 testimony.

JUDGE HUNT: Can you hit the lights over there, turn them back on. Well, are you ready for some questioning? All right. Questions for -- okay, Mr.

1 Rosenbaum.

2 MR. ROSENBAUM: Your Honor, I want to begin by 3 renewing my objection and moving to strike the testimony. 4 JUDGE HUNT: I will reserve on that for the 5 moment. б MR. ENGLISH: Just for the record, I joint that. 7 JUDGE HUNT: All right, Mr. English. EXAMINATION BY PARTICIPANTS 8 BY MR. ROSENBAUM 9 10 0 Do I understand the impact of your proposal to be 11 on that raises the Class III price by something in excess of 12 30 cents per hundred-weight assuming that you are incorrect 13 and that, in fact, the casein value used was 0.78 in the 14 formulation of the formula? Is that the bottom line that 15 you showed us? 16 The bottom line is that the current pricing Α 17 formula at 78 percent in my opinion misses 30 percent -- 30 18 cents per hundred-weight --Maybe you didn't understand my question. My 19 Q 20 question is, is the impact of your proposal one that raises the Class III price by 30 cents, assuming that you are 21 22 incorrect as to the question of how casein is treated? Is 23 that right or wrong? I am not asking you why. 24 А Okay.

25 Q I am asking you whether or not I am right about

1 the net impact.

2 А The proposal all the way to column 5, the answer 3 is yes. Okay. Now, right now fat in Class III products is 4 Q 5 priced based on the butter price, correct? б А Yes. 7 And you want to price fat in Class III based upon Q 8 the cheese price, correct? 9 А Yes. 10 0 Class III contains products other than cheese, 11 right? 12 А Yes. 13 Is one of them anhydrous milk fat? 0 14 А As to what I have been told, yes --15 Q Yes. 16 А -- anhydrous milk fat. 17 Q And does that -- is that something that competes 18 with butter in the marketplace? I guess that is not my area of expertise because I 19 А don't buy and sell butter. But it is a substitutable 20 21 product in formulation I would say. And as of today, the pricing of the fat in 22 0 23 anhydrous milk fat is the same as the pricing of the fat in 24 butter, right, because they are both based on the butter 25 price?

1 А From what I understand of the way the current 2 Class IV and Class III system works and with the assumption 3 that anhydrous milk fat is in Class III, the answer is yes. I thought you just told me a minute ago that fat 4 0 5 in Class III is priced based on the butter price. Isn't б that what you said a minute ago? 7 А Yes. Okay. And so if anhydrous milk fat is a Class III 8 Q product, then by definition it is currently being prices 9 10 based upon the butter price. 11 А Correct. 12 Q And based upon your proposal, that will no longer 13 be the case. 14 А That is correct. 15 Q Based upon your proposal, anhydrous milk fat is 16 going to be based on the cheese price, correct? 17 А Yes, if it is left in Class III. 18 Okay. And, indeed, 98 percent of what makes up Q anhydrous milk fat is fat, right? 19 20 А Yes. So virtually the entire price of that product will 21 0 22 now be based upon the price of cheese, correct? 23 А In the current -- in the system that I have proposed with that product in Class III, yes. 24 25 Q You have probably just destroyed the market,

1 haven't you?

2	A I just found out this morning that anhydrous milk
3	fat was in Class III.
4	Q And so you have now concluded that you have just
5	destroyed the market for anhydrous milk fat?
6	A I think I would conclude that I discovered that
7	anhydrous milk fat was in Class III that it is in the wrong
8	place. That it should have been in Class IV.
9	Q And would you conclude that because it is I
10	hope everyone agrees beyond the scope of these hearings to
11	address classification questions that if your proposal is
12	adopted and there are no changes in classification as there
13	cannot be, that you have just destroyed the anhydrous milk
14	fat market?
15	A That if there is no changes in classification,
16	yes, it is a problem for anhydrous milk fat.
17	Q Okay. And butter oil, Class III product?
18	A That I don't know. It is okay, it is a Class
19	III product.
20	Q Take my word for that one.
21	A Okay.
22	Q Same problem?
23	A Yes, if it is in Class III.
24	Q Okay. And there are some other products, plastic
25	cream, evaporated or sweetened condensed milk in a consumer-

1

type package, those are both products that are Class III

2 products. 3 А Okay. 4 0 Correct? 5 A I -- if -- I am not an expert on that. If they are classified as that, I would accept that as correct. б 7 And for those, as well, you will now be pricing Q 8 the butterfat in those products based upon the cheese 9 product price even though they are not cheese products. 10 А That would be correct the way the system stands 11 now. 12 0 And can one use butter instead of the -- well, let 13 me rephrase that. Are there practical alternatives to using 14 raw milk to obtain the butterfat necessary to make cheese 15 products? 16 A Yes. 17 Q And, for example, one can use butter to make cream 18 cheese? You can -- on that I don't know on cream cheese. 19 А 20 On ice cream, I know you can use butter. 21 0 Okay. 22 А I have never used butter to make cream cheese. 23 0 Okay. Cream cheese is also a Class III product? Again, I am not -- I don't know. 24 А 25 Q Okay.

1 A I think it is a Class II.

2	Q All right. But you would agree these are
3	potentially quite substantial problems from the adoption of
4	your proposal, correct?
5	A What I am proposing and what I said is that these
6	are technical issues to look at in terms of the way of
7	calculating the Class III cheese price. And particularly, I
8	think I said in my testimony, that the impact on other
9	classes is something that has to be considered. And clearly
10	the current system does not anticipate this type of change.
11	Q Now, I want to focus on this question about the
12	fat recovery in cheese.
13	A Yes.
14	Q Now, you understand that the current formula uses
15	a 0.90 for that, correct?
16	A Yes.
17	Q And you are advocating that go up to 0.915,
18	correct?
19	A Yes.
20	Q Now, and that is based upon your view that the
21	average cheese plant, in fact, does recover something more
22	like 0.915 of the fat in the cheese, correct?
23	A In my experience working with multiple plants
24	across multiple companies, I would say that that would
25	reflect what I have seen.

1 Q Okay. Now, this is my key question. Where do you 2 start your measurement when you reach that conclusion? 3 А At the vat. Okay. Where do my clients have to pay for their 4 Q 5 milk? б А At the farm. 7 Is milk lost between the two? Q 8 А Yes. 9 Do my clients have to pay for that? 0 10 А Yes. 11 0 Do we have to pay for the fat in that milk? 12 А Yes. 13 Okay. Does your formula adjust for that? 0 14 А As I said in my description, that in the make 15 allowance, the things that are part of the cost of doing 16 business which is shrinkage and everything else should 17 probably be reflected correctly in terms of a technically 18 correct make allowance. But the reality is shrinkage isn't in the make 19 0 20 allowance today, is it? 21 That is where I said in my testimony that it is А 22 not very clearly defined what is and what isn't in the make 23 allowance. And I don't know specifically. 24 Assume with me that shrinkage is not reflected in 0 25 the surveys that have been used to formulate the make

1 allowance, either the surveys that are in the current system 2 or the surveys that people have talked about at these 3 hearings so far. That has got to be accounted for somewhere, doesn't it? 4 5 А Yes. б Q Otherwise, you are deriving a system that is 7 basically giving my clients no money to pay for that two 8 percent or so shrinkage, correct? 9 А Correct. 10 0 And one way you can do that is through this yield 11 factor, right? From my point of view, it would not be the 12 А 13 technically correct way to do it. The technically correct 14 way to do it is let the yield factor reflect what happens in 15 the making of the cheese in the plant. And if there are 16 other losses or costs of doing business in the business, get 17 them in the make allowance. 18 All right. It has got to be either in the make 0 allowance or in the yield factor, correct? There is nowhere 19 20 else for it to be. А Right. 21 22 Q And for better or worse, the California Department 23 of Food and Agriculture, the Rural Business Cooperative 24 survey and the National Cheese Institute have all spent huge 25 amounts of time developing make allowance data that simply

does not capture shrinkage. As of these hearings today, it 1 2 is going to have to be in the yield factor, right? 3 А That is one place where it can be put, yes. Okay. And -- all right. Which would mean you 4 Q 5 would reduce the yield factor. I mean, that is how you do 6 it. You don't increase the yield factor. You reduce the 7 yield factor, correct? A You would -- by yield factor --8 9 Q Well, you reduce the amount of fat that you are 10 assuming is being retained in the cheese. 11 A You would keep -- you would either use a 90 or a 12 91.5 in terms of the fat retention. 13 You would use a lower number than you otherwise 0 14 would. 15 A If you were going to try to compensate for that 16 loss from the farm. 17 MR. ROSENBAUM: Okay. That's all I have. Thank 18 you. JUDGE HUNT: Yes, sir. 19 20 MR. OLSEN: Your Honor, my name is Brad Olsen. I am the General Counsel for Leprino Foods Company. 21 JUDGE HUNT: Your last name again? 22 23 MR. OLSEN: Olsen, O-L-S-E-N. JUDGE HUNT: Oh, Olsen. Okay, Mr. Olsen. 24 25 BY MR. OLSEN:

1 Dr. Barbano, I have a few questions. You are 0 2 going to have to bear with me because I have been trying to 3 keep up with your testimony. Earlier we were talking about 4 the fat recovery, just a few minutes ago. 5 А Yes. б Q Mr. Rosenbaum was talking about fat recovery. You 7 consider the fat recovery within a closed system, isn't that 8 correct -- cheese fat? 9 Within the cheese factory, once the milk arrives А 10 at the vat, that is correct. And there are losses, are there not, through the 11 0 12 manufacturing process after the cheese vat that are not 13 accounted for in that 90 to 93 percent? 14 А Those are accounted for in that 93 percent in 15 terms of fat that is not retained in the cheese. 16 Okay. And throughout the process, it is true, 0 17 isn't it, that through the cleaning process, you have fat 18 solids and such that will collect on the pipes much like they do between the farm and the plant. That will happen 19 20 through the plant, too. Right. There will be some losses or disappearance 21 А 22 of fat in the plant that will be implicit in that amount of 23 fat that isn't recovered in the cheese. 24 So there are those plant losses or losses of fat 0

25 through the plant process, as well.

1 A Right.

2 Okay. A couple of questions on milk composition. 0 3 And I certainly understand, Dr. Barbano, your expertise in 4 the area of milk composition. And it seems to be something 5 we all agree upon. Looking at milk composition, if I look at the appropriate -- and I am trying to hear what you said б 7 about being technically correct. So just bear with me here. 8 If I look at your findings as to an appropriate fat-to-true 9 protein ratio, your conclusion is that is something like 10 1.17.

11 A I guess my conclusion is that when -- by using 12 that ratio, it creates a situation where some producers will 13 have a decreasing payment per hundred-weight if they are 14 below whatever the ratio is set or they will have an 15 increasing payment per hundred-weight when the butter price 16 goes up.

So moving the factor just changes how many people go up and how many people go down. If you want to move it to someplace where half the producers go down and half the producers go up in their dollar per hundred-weight as in terms of that ration, then you would select a ratio that is representative of the average of the milk supply if that is what you were trying to accomplish.

Q What I am trying to track along here is that you would find that 1.17 is more reflective of the average

1 milk composition.

A That was an example for that one population of
farms. I do not have data on what would be representative
either of the milk going into a cheese all cheese
factories in the Federal Orders or the national milk supply.
It would have to be a number that should be calculated. I
don't have that number.
Q So the data in the proposal that you have
presented today is based upon the one farm milk in the
southwest in '99?
A That is right. Just as an example, to show the
situation for that group of producers.
Q Okay. And then that was where you came up with
the average of 1.17 for that group of producers.
A For that group of producers, it just shows the
average.
Q And you haven't considered what that average would
be on a nationwide basis and what the impact would be with
respect to your proposal.
A My proposal would be to get away from using that
type of factor all together and calculate the price of the
Class III milk differently based on the technical yields.
Q No, I understand. But you haven't considered any
of that other data. In comparing your in developing your
study, you are comparing the results of your proposal with

1 the current system.

2	A Right. I have not taken another group of farms
3	and compared it to the 1.28. And there will be variation in
4	what you get for a population mean depending on which group
5	of farms you select.
б	Q Okay. And pursuing a similar theme, on the
7	casein-to-true protein ratio, as I read your testimony on
8	several pages, but page 22 would probably be as good as any,
9	you have a 0.822 casein-to-true protein ratio for milk
10	composition. And that is something that you believe based
11	upon your expertise is an appropriate ratio.
12	A Well, it is reasonably close I think to what the
13	milk supply if you did a big survey would come out to be. I
14	said between 82.2 and 82.4. And I think if you looked, you
15	would find the average of the milk supply is somewhere in
16	that range today.
17	Q Okay. Now let's talk a little bit about the 75
18	percent, 78 percent crude protein in milk, you know, with
19	casein level as a topic heading. Okay? If I understand
20	your testimony, the you find that the generally accepted
21	average and, again, I am this relates to national milk
22	or national milk composition. That the generally
23	accepted average would be 78 percent of crude protein in the
24	milk is casein. Is that accurate?

25 A Has been a long-time accepted value since the

1 early part of the 1900s.

2	Q So you are comfortable with that.
3	A No.
4	Q The 78 percent?
5	A I have data to show that it probably is not a
6	correct reflection today.
7	Q And where is that data?
8	A Where is that data. The it is shown in
9	Q Let me help you out here.
10	A Sure.
11	Q If I look at page 17
12	A Okay.
13	Q towards the bottom, third to the last line
14	A Yes, okay.
15	Q does that help you?
16	A That's I am saying that. And when I come over
17	and give data on the following pages, if we went back to the
18	publications that I have done on this, you could look at the
19	exact numbers for casein as a percentage of crude protein.
20	And it runs a little bit less than 78.
21	Q Okay. So 77, 78, a little bit less than 78,
22	somewhere in there.
23	A Yes, correct.
24	Q Okay. Okay. Now is where I get a little confused
25	here. So I am going to walk through this sort of step by

1 step.

2 А Okay. 3 Q All right. Now, your proposal uses as a default value a 75 percent --4 5 А That is correct. -- default value for that number instead of 78 б Q 7 percent. 8 А That is correct. 9 Q Okay. And as we have just talked about, that 10 value is not really reflective of the actual percentage of 11 crude protein that is casein based upon what we just talked 12 about. 13 А Right. 14 Q Okay. And this would be one of the technical 15 factors you think should be corrected. I think should be corrected. And I think in my 16 А 17 opinion, 0.75 is what has really been used in the current 18 system. As I have shown on page 1 of the two-page testimony 19 document that I presented to demonstrate that when you 20 calculate the change in yield per change in protein using 21 the Van Slyke formula, that the 1.32 can only be arrived at when you are using a 0.75 as the casein following the 22 23 procedure that is given in the final rule on page 183. 24 And in my opinion, that is the technically correct 25 way to calculate the change in yield per unit change in

1 protein or casein.

2 Okay. So let's talk about your -- this is Exhibit 0 3 16, right, that two-page calculation? 4 А Yes. 5 0 And if you look at the top of that page, it refers б to page 183 of the final rule. And there is a quote there. 7 А Yes. And in the second line, it says, "Calculating the 8 0 change in cheese yield if an additional tenth of a pound of 9 10 protein" --11 А Right. 12 0 -- and then it goes on, correct? 13 А Yes. 14 Q And so that would seem to be based on an 15 incremental value or yield of protein, not the average that is contained in the milk. 16 17 А That is correct. 18 Okay. And do you know what the basis of -- or Q 19 what led to this particular wording in the final rule? Do 20 you happen to know? 21 I don't know. But I know from the point of view А 22 of what will happen in a cheese factory. If I make cheese, 23 cheddar cheese from a milk that has a tenth of a percent 24 higher protein, that I can calculate with this formula what 25 the difference in yield will be. And I know that if I use

the 0.75, that it is going to give me a 1.32. That is going to be the change in yield for a change of 0.1 pounds of crude protein. And if I use a 0.78, the change would be the 1.371.

5 And from my point of view, the current system if 6 it was using the 1.371 adjusted then to a true protein basis 7 which would move it to a 1.456, would then put it in my 8 opinion on the 78-percent basis.

9 Q And that is the basis of that exhibit we were just10 talking about.

11 A That is right.

Q That Exhibit 16. Okay. And, again, and I know I've said this several times, but if you could just answer my questions and sort of walk me through this baby steps if you will before we get too far into the other formulas and factors and the like, it will help. It will help me.

17 A I will try.

Q Okay. Now, if I want to get a 75 percent protein into the cheese, if I want that to occur, all right, if I want to have 75 percent protein recovery in the cheese, I need to start with something higher in the milk.

A That number is not protein recovery in the cheese.
If you go back to -- and we are talking about two different
things.

25 Q I agree.

1 A Okay, okay.

2 Q Okay.

A Then let me -- 75 percent protein recovery in the
4 cheese, if you want to achieve that. Yes.

5 Q Because if you have that, you have a different 6 situation, correct? And you would have to start at a higher 7 percentage of protein in the milk in order to get that type 8 of a recovery logically speaking.

9 A Changing the protein level in the milk will not 10 change your percentage of that protein -- of protein

11 recovered in the cheese.

12 Q If I have 38 percent moisture cheddar cheese -13 A Correct.

Q -- obtained from one pound of protein with 75 percent of the protein going into the cheese as calculated using the Van Slyke formula, I have got to have something higher, a higher percentage in the milk.

18 A I guess I am not following you. In terms of
19 protein recovery, if you were recovering 75 percent -- let's
20 say you had a 3.2 protein --

21 Q Sure. And we have got a percentage of casein in 22 the milk, 78 percent.

23 A Okay.

24 MR. OLSEN: You know what, I think this might 25 actually help. Let me just -- if I may, I have got an

1 exhibit that I have prepared, Your Honor. 2 JUDGE HUNT: All right. We will mark this as 3 Proposed Exhibit 18. (The document referred to was 4 marked for identification as 5 Exhibit No. 18.) б 7 MR. OLSEN: Here are a few more copies if anybody 8 wants one. 9 JUDGE HUNT: Can you have Dr. Barbano identify what that is, Mr. Olsen? 10 MR. OLSEN: Yes, I will, Your Honor. 11 12 JUDGE HUNT: Okay. 13 MR. OLSEN: And I would also like Your Honor to 14 take judicial notice of the order or the ruling here in the 15 Southern Michigan Marketing Area that was published as a 16 result of public hearings held in Michigan in '93 and '94. 17 These are two pages from that entire document. 18 JUDGE HUNT: This is Exhibit 18? MR. OLSEN: That is correct, Your Honor. 19 20 JUDGE HUNT: You are asking official notice of 21 that. MR. OLSEN: Yes, sir. 22 23 JUDGE HUNT: All right. 24 MR. OLSEN: Without the annotations on the page 25 that I am going to ask Dr. Barbano to speak to for just a

1 moment. And I would like to have Exhibit 18 offered into 2 evidence. 3 JUDGE HUNT: Offered into evidence or take official notice? 4 MR. OLSEN: Well, let's start off with taking 5 official notice. 6 7 JUDGE HUNT: Okay. 8 MR. OLSEN: Okay? And then --9 JUDGE HUNT: Does anyone have any objection to 10 taking official notice of the Federal Register on the rule that Mr. Olsen referred to? 11 UNIDENTIFIED MALE SPEAKER: Can you identify it a 12 13 little more specifically? 14 JUDGE HUNT: Mr. Olsen, can you identify that --MR. OLSEN: Sure. It is the proposed rule. It is 15 16 at Federal Register August 18, 1995, Volume 60 Number 160, 17 pages 43066 to 43089, 7 CFR Part 1040. And specifically, I 18 have got pages 1 of 46 and 16 of 46 that I have handed to Dr. Barbano as potential exhibits. 19 20 UNIDENTIFIED MALE SPEAKER: Are these exhibits 21 or --MR. OLSEN: Well, right now it is official notice. 22 23 Okay. And I want to ask Dr. Barbano to read --24 JUDGE HUNT: Any objections to take official

25 notice of the Federal Register? No objections. Then I will

1 take official notice of the Federal Register you referred 2 to. 3 MR. OLSEN: Thank you, Your Honor. BY MR. OLSEN: 4 5 0 Dr. Barbano, now I have marked a paragraph, б paragraph 3. If you could read that to yourself because I 7 am going to ask you some questions about it. 8 MR. COOPER: We don't have enough copies. So I 9 think somebody should read that out loud --10 JUDGE HUNT: Do you want to read it, Mr. Olsen? 11 MR. OLSEN: Sure, that's fine, Your Honor. I will 12 read it. It is on page 16 of 46 of the document I have 13 previously referred to, paragraph -- it is the third 14 paragraph at the top of that page. That is at the very end 15 of page 43073 of the Federal Register. 16 "Undisputed by hearing participants was the 17 1.32" -- excuse me -- "1.32 factor which represents the 18 pounds of 38 percent moisture cheddar cheese obtained from 19 one pound of protein with 75 percent of the protein going 20 into the cheese as calculated by the modified Van Slyke cheese yield formula. The hearing record indicates that 21 22 modified Van Slyke formula accurately measures incremental 23 changes in protein. This accuracy supports the concept." 24 And then it trails off the page. But that is the key part. 25 BY MR. OLSEN:
1 And then over in the right-hand column, Dr. 0 2 Barbano, I have a reconciliation where with -- of how you 3 get to 74.88 percent protein in the cheese. Could you take a look at that calculation and see if that is accurate? 4 5 A Up to the point, the calculation takes the 3.2 б percent protein, multiplies by 0.78 to get a 2.496 pounds of 7 casein in the milk, then subtracts from it 0.1 for a casein loss to give a 2.396 casein in the cheese. Up to that 8 9 point, I am okay. 10 At the next step, it divides that number by 3.2. 11 At that point -- let me read the paragraph again -- in my 12 opinion, that is not the incremental change or the change in 13 -- when you divide by 3.2, that is going to give you the 14 amount of protein in the cheese. 15 0 So up to there, we are okay. We've got the 16 protein. 17 А Up to there, we are okay. But the value that you achieve that way will not be the incremental change in 18 cheese yield by dividing that by 3.2. 19 20 Q But that will give me the -- and I agree with you. 21 А Right. But it will give me the 74.88 percent protein in 22 0 23 the cheese given this formula. That is -- okay. The value comes out to 74.88. 24 А 25 Q And --

1 А The question of the meaning of that value --2 Well, right now, sir, I just want to --0 3 А Okay. -- I just want to -- take us again one step at a 4 Q 5 time. б А Okay. 7 All right. So I have got 74.88 percent protein in Q the cheese --8 9 А Correct. 10 Q -- which is what we are talking about in this 11 paragraph that I have highlighted with 75 percent of the 12 protein going into the cheese. 13 Yes. The 74.88 percent of the protein that was in А 14 the milk has gone into the cheese. 15 Q Okay. 16 А Correct. 17 Q And you are familiar with the Michigan hearings. 18 А Yes, in general. I think -- actually, I think I was there for part of it. 19 Okay. Probably several of the folks in this room 20 Q were there. And this Michigan hearing was the first time in 21 this rule that derived from the Michigan hearing was the 22 23 first time the multiple component pricing was adopted into a 24 Federal Order. And that is correct to your knowledge? 25 A To my knowledge.

1

MR. OLSEN: I would like this offered into

2 evidence, Your Honor. 3 JUDGE HUNT: Pardon? All right. Mr. Olsen has moved that Exhibit 18 that includes the -- your notation or 4 5 figures on the side, that is what you are offering as an exhibit? б 7 MR. OLSEN: Correct, Your Honor. JUDGE HUNT: All right. Exhibit 18 into evidence. 8 9 Anybody object to it? That includes his computations on the 10 side in the margin.

11 MR. COOPER: What was the representation about the

12 component pricing?

13 MR. OLSEN: Pardon?

14 MR. COOPER: You made some representation about15 component pricing. Maybe we misheard it.

MR. OLSEN: Oh, no. Well, I don't know what you heard, of course. But what I meant to say was that the concept of multiple component pricing as such and being adopted into the Federal Order System, that this occurred -maybe this is a better way of phrasing it -- that it occurred prior to the final rule that we are discussing today.

23 MR. COOPER: Prior to your exhibit?
24 MR. OLSEN: No. Prior to the final rule -25 MR. COOPER: I'm just trying to figure out --

MR. OLSEN: No, no. I understand. 1 2 MR. COOPER: Are you trying to say that this 3 Southern Michigan was the first time that multiple component pricing was adopted in the Federal Order? 4 5 MR. OLSEN: What I am clarifying -б MR. COOPER: Oh, okay. 7 MR. OLSEN: Okay -- is the final rule that is the subject of the hearing today, what we are talking about 8 9 amending portions of it, okay? 10 MR. COOPER: Oh, okay. MR. OLSEN: That final rule was not the first time 11 12 that multiple component pricing was adopted in a Federal 13 Order. Is that a better way of phrasing? You folks are 14 certainly better than I. But --MR. COOPER: Yes. It sounded like you were saying 15 16 Southern Michigan was the first place to have it. 17 MR. OLSEN: Well, that is what I said initially. 18 And then I realized that that probably isn't accurate, particularly given your reaction. 19 20 (Laughter.) JUDGE HUNT: All right. The question is still are 21 22 there any objections to Exhibit 18? 23 MR. YALE: Your Honor. 24 JUDGE HUNT: Mr. Yale? 25 MR. YALE: Yes, Ben Yale on behalf of select milk

1 producers of western states and other components of proposal 2 1 and others. We do object because the numbers that are on 3 the side are not Dr. Barbano's numbers. And if they want to 4 put on a component to explain what those numbers are, what 5 they mean so we can cross examine them, fine. б But that is not his exhibit. He didn't generate 7 those numbers. He doesn't fully agree with them or the 8 methodology. And if they want to put it in some other way, 9 that is fine. But I think at this point, we would object to 10 that. JUDGE HUNT: Do you also object, Mr. Beshore? 11 12 MR. BESHORE: Yes. 13 JUDGE HUNT: For the same reason? 14 MR. BESHORE: Well, it is hearsay, declarant 15 unknown. 16 (Laughter.) 17 MR. OLSEN: The declarant, Your Honor, may I --18 JUDGE HUNT: Dr. Barbano did verify the mathematics, that it was correct. So I will accept Exhibit 19 20 18 and enter it into evidence. 21 (The document marked for 22 identification as Exhibit No. 23 18 was received in evidence.) 24 MR. OLSEN: Thank you, Your Honor. 25 BY MR. OLSEN:

1 A few more questions in my trek through this, Dr. 0 2 Barbano. Dr. Barbano, I am looking now at the first page of 3 your testimony. 4 А Okay. 5 0 And in particular, I am looking at the first б sentence or --7 А Yes. -- the first sentence or two. And then that is a 8 0 9 recitation of your areas of expertise? 10 А Yes. Is it complete with respect to the dairy industry? 11 Q 12 А I would say so. 13 Okay. And a little bit -- I am used to a lectern. 0 14 So I am struggling here trying to keep everything together. 15 Page 3, top of the page, second line. I heard you to say 16 when you reading from this ranging from 1.145 to -- it reads 17 1.18. I heard you to say 1.8. 18 А It says 1.18. Okay. Would you agree that your new method or 19 0 20 proposal is significant? 21 А Significant. 22 Q Well, let's put it this way, is it new, a new 23 concept that you have unveiled? 24 Actually, it is -- to me it is not new to me in А 25 that it is the Van Slyke formula used in a complete mass

1 balance technically correct way.

2 To those of us in the rest of the industry, would 0 3 you object -- would you find it a fair characterization that 4 it appears new? 5 A Yes. And that is why it was put on the website б ahead of time to let people take a look at it. 7 And I do appreciate that. Have you read the 0 hearing notice --8 9 А Yes. 10 0 -- for this hearing? 11 А Yes. 12 0 Is your proposal in the hearing notice as a 13 proposal? 14 А No, it is not. 15 Q Okay. In your testimony, you discuss the 16 inconsistency between the 39 percent moisture content and 17 the barrel price, correct? And -- I should give you the 18 rest of that sentence, that would be fair. Between the 39 19 percent moisture content and the barrel price and the 38 20 percent moisture content in the yield assumption used in the current Class III price formula. That is one of those 21 22 technical areas that we should look at? 23 А Okay. I think -- let me state the barrel yield 24 and price is adjusted to 39 percent. The moisture content 25 used in the calculation for the Class III price is 38. I

said that the price -- the moisture content of the block
 cheese is probably something less than 38. And it has got
 to be at least 36.5.

There was 62 percent of the cheese in the survey roughly is barrel cheese. And I know that that price for barrel cheese is what it would be at 39 percent moisture. And I said that if we make some assumptions about the block cheese, it has to be at least 36.5, that probably the real average moisture in the survey with the adjustment is somewhere near 38. I think the number was 38.05 --

11 Q Okay.

12 A -- in terms of an estimate because we've got the 13 38 percent of the cheese, we don't really know what the 14 moisture content is. And that 62 is more of a long-term 15 average of the proportion of the total cheese in the survey 16 that is barrel cheese.

Q And is it accurate that your formula in terms of adjusting for consistency, you still contain in your formula the three-cent add-on to the barrel price? Is that accurate?

A In my formula, I am using the NASS price just the way it is or just doing the moisture adjustment that changed when I went from the 38 to 36, just ran in reverse the calculation NASS would use to go from 36 or lower which would be the barrel cheese composition when it is really

made, up to 39. I just reversed that because their price 1 2 that they have stated is supposedly a price at 38. 3 Q And that -- and the NASS survey contains as a piece, if you will, the three-cent add-on --4 5 А Yes. б Q -- for the barrel price. 7 It is already --А 8 0 Okay. 9 А -- whatever they have in there is what it has. So it is still there. That three-cent add-on 10 Q price is still in there because you are taking the NASS 11 12 data. 13 А That is right. 14 Q Okay. I just use the NASS data. 15 А 16 0 And were you here for Dr. Yonkers' testimony 17 earlier? 18 А For part of it today. I was not here yesterday. Yes, just today. Were you here today when he 19 0 20 discussed --21 А This morning. MR. OLSEN: -- the -- well, now I say he discussed 22 23 it today. You know what, I will leave that for now and 24 check because I wasn't here yesterday either. So let me 25 just check before I ask you about testimony you may not have

1

heard. Okay? And that is it for now. Thank you.

2	JUDGE HUNT: Mr. Marshall?
3	BY MR. MARSHALL:
4	Q Mr. Barbano, we have never worked together before.
5	I am from a co-op based in Seattle known as Northwest
6	Dairymen's Association. And my name is Doug Marshall. I am
7	responsible for the producer side of our operation. And I
8	want to focus in that direction for a moment.
9	The first part of your prepared testimony that is
10	in Exhibit 4, I want to talk a little bit about sending
11	price signals to producers. And as I recall, the as I
12	interpreted your numbers, the kinds of price volatility we
13	have seen in butterfat have led to some inconsistent results
14	in the fat value of in the value of fat used in cheese.
15	And you saw this as sending inappropriate signals to
16	producers.
17	My question for you is, in sum, but I will do it

17 My question for you is, in sum, but I will do it 18 step by step is how important that is in the greater scheme 19 of things. Do you have a sense that producers can respond 20 quickly to the kinds of changes in fat value that have been 21 represented in your graphs that show that volatility we have 22 had over the last couple of years?

A Producers can make some responses in terms of
feeding techniques to change fat levels several tenths in a
relatively short period of time.

In the situation we had in 1998, the fall of '98 1 Q 2 when, as you recall, butterfat reached record prices, the 3 problem you are complaining of, if I interpret it correctly, is that the fat value in cheese wasn't as high as the even 4 5 higher fat value in butter clearly was. Is that correct? 6 А Can you repeat that again? 7 Sure. I understand the problem that you are Q indicating is that the fat value in cheese was not as high 8 as the fat value in butterfat. Therefore, it was sending --9 10 excuse me, as the fat value in butter. 11 А Butter. 12 Q Therefore, sending a wrong signal to the 13 producers. 14 А Well, what that did was it creates a low value for the skim portion on the fat -- in Class III. And as a 15 16 result, when the -- for some segment of the population of 17 producers being paid, that if their milk composition was the 18 same as it was a month ago in terms of fat and protein content, their price per hundred-weight went down if they 19 20 had a ratio of fat to protein below the 1.28. In other words, if they had relatively low fat in 21 0 22 their milk. 23 А Yes. A relatively low fat test would disproportionately 24 Q 25 give them a lower value than their neighbor with a higher

1 fat value.

2 Well, a neighbor with a higher fat value would Α 3 always have a higher price. 4 Well, we are not communicating here and it is 0 5 probably my fault. So I apologize. But it seems to me that б the price signal that you are complaining of which you are 7 quite correct in your math shows a lower skim value, the 8 price signal that should be sent in that kind of market that 9 we saw in the fall of '98 is produce more butterfat. 10 А I guess, yes, there was a need for more butterfat. 11 But at the same time, since the skim value went down and the 12 price per hundred-weight went down, the signal was, you 13 know, I don't need more milk. That at the milk composition 14 that I had last month, that since the price that I am being 15 offered this month being one of those producers on the low 16 end is lower than what I had last time, it is hard to get 17 motivated to delivery more milk or more fat. 18 We clearly have some things to explore here. I 0 19 think we are both assuming for purposes of this discussion 20 that in market conditions like '98, we had had in effect the proposed Barbano proposal and/or the final rule that didn't 21

22 go into effect until January.

A Okay.

Q And -- well, let's just take it a step at a time.
First of all, you would agree, wouldn't you, that the price

1 signal sent to producers would depend a whole lot on how the 2 Federal Order chose to express the component values of 3 butterfat and protein and other solids? 4 А Yes. 5 0 And are you proposing the change in computations б that you have described would also be the -- would also be 7 transferred over to the producer side where the butterfat 8 value paid to producers out of the pool would equal the 9 butterfat value in Class III, the protein value paid to 10 producers paid to producers would equal the protein value 11 paid by processors and the other solids value paid to 12 producers would be the same as that paid by Class III 13 processors? 14 А As I heard you, you are going into the pool. And 15 I am looking at the Class III price calculation. 16 You are looking at the Class II processors, right? 0 17 А I am looking at the minimum price. To a processor buying milk at Class III. Okay. 18 Q 19 Are you --20 Α The Federal Order minimum price. They can pay more than that, but this is the Federal Order minimum price. 21 22 Q Are you aware that those same component prices are 23 used to pay producers per hundred-weight and -- excuse me.

They are not either. They are used to pay producers their

component values that make up the Class III portion of their

24

25

1 milk check?

2 А Yes. 3 Q Okay. Are you assuming then that producers would 4 be paid butterfat prices, protein prices and other solids 5 prices that would be the same as cheese-makers would pay into the pool? б 7 А The cheese-makers would be paying into the pool or 8 in the Class III -- what happens in the current system in 9 that scenario is the fat value went up and the price per 10 pound of protein went way down. At the same time in the 11 system that I am proposing, that price per pound of protein 12 won't go down because it is not using that calculation with 13 the fat. And the fat value would track with the cheese 14 value. I think I understand that. And that is what you 15 Q 16 described as what a processor of cheese should pay into the 17 pool --18 А Correct. 19 0 -- for his component tests -- based on his 20 component tests. And I am asking you, would you use the same component values to pay producers? 21 22 А Yes.

23 Q So that the component values paid to producers 24 would reflect the value of butterfat as cheese, not the 25 value of butterfat as butter.

A In terms of paying -- if I am paying producers that are going to cheese factories and I am establishing a price for components to use for everybody, we are using the same price per pound for those components for everyone. Right? Is that --

6 Q Well, no. I think that we have maybe a 7 disagreement here or a misunderstanding about where I am 8 going with the testimony. And you are not helping me get 9 there. And I am afraid that -- if you and I could sit down 10 over a beer, we would have pretty good communication. But 11 today, we are doing this through a formal process and we 12 don't even know each other. So this is tough.

But I am trying to focus on the price signals to producers. And today the price signals to producers are that component values, at least in the -- those orders, the majority of the orders that have component pricing, we have a Class III value that is broken down into components --

18 A Okay.

19 Q -- that are used as the basis for Federal Order 20 payments -- excuse me, the Federal Order calculation of 21 payments due to producers. The protein value is as 22 calculated in the Class III price formula for processors 23 which is to say that the butterfat portion of the component 24 value received by a producer reflects the butter price and 25 not the cheese price.

1 A Currently.

2 Q Currently.

3 A Yes.

4 Q Are you proposing to change that?

5 A The --

6 Q That is where I have been heading.

A And what my proposal has done has arrived at the
protein value and the fat value and trying to get that
technically correct.

10 Q Within the context of a cheese plant, right?
11 A Within the context of a cheese plant and within
12 the context of the Class III minimum price. I have not gone
13 any step further than that in terms of how you will deal
14 with producers or things in other classes.

15 I have just focused on getting to the technically 16 correct protein value per pound and fat value per pound and 17 try to make that so that we don't create situations of 18 changing protein value when you look at the fat value going 19 up and the protein value going down.

And I as a cheese-maker -- and it does the same thing in reverse. You can make the opposite argument just as well that when the fat value is really low, that protein costs per pound looks high relative to what the powder is over here. It can go either direction. And what this -- in terms of what I was trying to accomplish is taking out those

1 big swings.

2	Q Okay. Well, let's focus then on what you want to
3	talk about which is a cheese plant. But before I move on
4	then, I am going to take that answer to my last question as
5	a no, that in effect you are not proposing a change in the
6	producer component value calculations.
7	A I am not proposing I am not going that far.
8	And I haven't really gone through to calculate anything on
9	that.
10	Q And just so you know what the problem is there,
11	there are more classes in the Federal Order than Class III.
12	A That's right.
13	Q And one of the virtues of the present system is
14	that producers historically and I think in the future relate
15	the butterfat value to the butter market. And if we didn't
16	do that, if we in fact simply used your formula for the
17	butterfat price as the pay-out price to producers, you would
18	no longer have that happen.
19	A And that is where
20	Q And that is the problem I am trying to address
21	here. I am hearing you say it is not what you are
22	A So I am assuming that there is still a separate
23	price in Class IV for butterfat.
24	Q Right.
25	A The choice of what fat value you use for paying

1 for fat in other classes is a different question.

2 Right. Q 3 А And I have no opinion on that. I am looking at 4 the technically correct way to get the fat and protein 5 values worked out on the cheese. б I understand that you are telling me that you are 0 7 not proposing that there be a change in the butterfat value on the producer side. I also assume then that you have no 8 9 opinion as to what the protein value paid to producers 10 should be or how it should be calculated either. 11 А The protein value paid to --12 Q Producers. 13 -- producers --А 14 Q That goes beyond your study, does it not? 15 А It goes beyond what I am doing there other than 16 the fact that it arrives at a price that could be used to 17 pay producers based on that Class III value. If there are 18 other rationales and other reasons for blending or doing things across classes, that is a separate issue that I 19 20 haven't gone that far to address. I am just trying to establish a technically correct protein value in the cheese 21 22 milk side. 23 I understand that. And I think we are all Q

24 understanding that that is not where you have gone with this 25 model. It does propose some technical problems in terms of

1 the hearing notice.

2 А Yes. 3 Q But I am not going in that direction. I am not 4 objecting to your testimony in terms of it being introduced 5 here. I am just simply stating that I understand your б testimony to be that you are not proposing anything with 7 respect to how producers should be paid in the component 8 pricing system to producers. 9 I am proposing only how to arrive at the value per А 10 pound of protein and pound of fat. And --11 0 To a cheese plant. 12 А -- to -- for the Class III price -- for the Class 13 III minimum price which would be to I guess since they would 14 pay Class III in an order plant --15 Q Right. 16 А Yes. 17 Q In fact -- and believe me, I am not trying to 18 browbeat you here at all. But I think we described earlier the fact and you discussed with Mr. Rosenbaum the fact that 19 20 you really weren't aiming it to a butter oil plant or to producer prices or to anything. 21 22 А Right. That's right. 23 Q Just to cheese plants. А That's right. 24 25 0 Okay. So now I think I can move off of the

1 producer side and simply note that unless I am missing 2 something here, I would invite you to amplify that the 3 producer signals are sent in producer component pricing. 4 And producer signals are not sent on the Class III price as 5 computed or as cheese plants have to account for it. The formula, in other words, by which the cheese plant pays into б 7 the pool does not send a price signal to a producer by itself, does it? Only the Federal Order price to producers 8 9 sends the signals to producers. 10 Α Ultimately, the blend price sends the signal. 11 Q Okay. And I will drop that line of inquiry. 12 Quite related to it though is the fact that we as a co-op 13 are selling cream sometimes to cheese plants. And you 14 talked about fortification and ideal fat-to-casein ratios 15 and you understand I think about the fact that sometimes 16 cheese plants buy cream to achieve the right balance of a 17 fat to casein ratio. 18 Have you given any thought to what disconnecting 19 the cream value of Class IV from the cream value of Class 20 III would do to the economics of the model that you have 21 proposed when cheese plants have to buy milk from outside 22 sources in a form of cream where there isn't available a

23 churn to put it into Class IV at times like 1998 when you
24 had a very high butterfat value?

25 A When you had a very high butterfat value. So if

the value of fat and cream was higher in other classes, as a cheese-maker, I would have to make a decision in terms of evaluating the economics of my business of can I afford to buy that cream. Will it free up and be available in the marketplace when somebody has got an alternative to go to a higher price. Probably it won't.

7 And I should be thinking the other way. If I am 8 making my cheese at 53, 54 or 55 FDB, if I am making barrel 9 cheese, does it make sense for me to actually remove fat 10 from my milk and move it out. My total net income on the 11 milk I purchased might be more by changing the composition 12 of my cheese.

Q Right. And then my question -- and I think that is exactly right. That is exactly what would and should happen. And so but my question was what is the impact of that on the model that you have proposed? In other words, your technically-correct ratios would no longer apply, would they, without that additional fat necessary to achieve the balance that you have assumed?

A The ratios -- everything still applies. It just at that point becomes an economic decision doing the math that as a cheese-maker, the impact of that fat on my yield to give me the higher FTB, does it give me more return if I keep it there or does it give me more return if I take some of the fat out of the milk and get a higher cream value for it selling it out of the plant, does my net total return
 from the sale of cream plus cheese come out higher than
 leaving the fat in the milk.

Q All right. So the baseline would be your study technical assumptions. And perhaps you could do better by leaving the fat out of the milk. I think that is right now that I think about it. Yes.

That perhaps you can do better. But the other 8 А 9 alternative, if that plant let's say has been running 53 10 FDB, they want to keep that FDB. But they have been 11 fortifying with nonfat solids to bring the composition up 12 whcih is beyond what is in the base Class III. But, again, 13 they get to the point of saying what is the price of powder 14 and what is the price of cream and should I still be buying 15 that outside cream and using that powder or should I get out 16 of that.

And, you know, again, the value of the cream outside will be factored in in terms of what is the right economic decision for the cheese-maker to do. They are doing that now every day.

21 Q Does it work that way because your model assumes 22 no fortification?

A The model I have assumes no fortification. When
you start assuming fortification, it changes everything.
Q Right. And that is what I was really getting at

when I say if you take cream, wouldn't it change your model, also?

3 А It wouldn't change the model. What happens is 4 that it is totally dependent. It just an economic decision 5 based on the value of the fat outside that cheese plant. If б it is valuable enough, then if you just do the calculations, 7 it will tell you at this point it makes more money by putting that cream out. Now, it will take quite a 8 9 difference to trigger the hassle of doing that if you have 10 got the equipment to do it.

11 Q Well, let's get beyond that because I am not a 12 technical guy cheese plant-wise. But let me just tell you 13 what I will argue in brief here and I will let you comment 14 on it in advance.

15 A Okay.

Q I am going to argue that if you have a disparity between the price of butter in the Chicago Exchange and then the NASS surveys and the price of cheese, that there will be a tendency to move milk towards butter powder plants and that the cheese plants would have to pay more for the milk. And there is no way for them to recover that cost either for the milk or for the cream.

And that as a result of that, the lack of symmetry between the butterfat price and the cheese butterfat price will cause an extra cost factor that is not anticipated

1 either in the proposed yield formulas that you offer or in 2 the proposed make allowances that we have been thinking 3 about here at this hearing. I guess I would look at it differently. And I 4 А 5 would say if I was an aggressive cheddar plant doing business to make money, I would be there fortifying and б 7 using extra cream. This becomes a decision. If you are 8 telling me that the value of cream is getting higher, that's 9 -- in the other use, in Class IV, what is really needed in 10 the market is some cream needs to be freed up. 11 Here I am as a cheese plant using extra cream to 12 work with powder. And you are -- what the system does when 13 that price goes up is it dangles a carrot if there is a 14 difference in fat value in the cheese versus the Class IV to

15 get that cream to come from the cheese plant over into the 16 butter plant.

17 And that will -- in my opinion, not only the effect of getting rid of that volatility in the protein and 18 19 fat type of changes, the pounds -- the value per pound of 20 fat, value per pound of protein. That, in addition, when the value of fat in Class III calculated this way gets very 21 22 different than the value in Class IV, it is either going to 23 move fat -- when the value of fat is lower than cheese, the cheese-maker is going to have an incentive to double 24 25 standardize and push and use cream that is available. And

1 the reverse will happen when the difference goes the other
2 way.

3 Q I fully agree. And I guess the concern that I am 4 addressing really is as follows. I have cheese plant 5 customers who occasionally will buy milk from our cooperative. Right? I also have a subsidiary company that б 7 has butter powder plants and cheese plants. Right now, 8 today we have very high butter fat value relative to the 9 value of a pound of cheese and relative to the value of a 10 pound of powder.

11 So we are moving all of our milk into a nonfat dry 12 milk and butter operation whenever possible rather than 13 putting it into a cheese plant. Do you understand the 14 premise here for the question I am about to pose?

15 A Yes.

16 Now, when one of cheese plants might come to me Q 17 and say I would like additional milk, my preference is to 18 put it in our butter powder plant because that is where I get the highest return. And they are not going to get that 19 20 milk from me unless they pay a premium for it. And that is not accounted for in any way either in the NASS survey and 21 22 its relationship to the costs of processing or in any other 23 way in the model you propose. They simply can't buy it. 24 Well, why wouldn't that -- to me the cheese plant Α

25 would still buy that milk. And if you need that cream, I

1 will buy it, pull out what extra fat I don't need to keep my 2 milk supply and get the cream to that butter plant. 3 0 Well, hypothetically -- and you used a good 4 terminology. You talked about harmonizing the whole system 5 from beginning to end --6 А Right. 7 -- from the NASS price right on through. And I Q 8 support that as one who has been working through these kinds 9 of issues for ten years. And what I am getting at is if a 10 cheese plant then has to pay a premium to me, how is that 11 going to -- to obtain the milk away from a butter plant, how 12 is that going to be reflected back to the cheese plant in 13 some way that that cheese plant can pass it on to the 14 marketplace? 15 А In other words, the problem is the cheese plant 16 wants to bid up the price of milk to equate to the higher 17 butter value. 18 I guess the question is what is the cheese price 0 19 doing at that point. 20 А Well, let's use --If the cheese price is relatively low and the 21 0 22 butter price is high, it tells me that there is not a big 23 signal from the marketplace that the market wants cheese. 24 That is the situation we are in today, isn't it? 25 Now, if a cheese plant wants to buy milk though,

1 how do they recover that additional cost that I need to 2 charge to give up the value of the butterfat that I can get 3 out of our butter powder plant? Do you see my concern? Do 4 you have a comment as to how that can happen? I guess --5 А The cheese plant is only going to pay into the б Q 7 pool the lower butterfat value that your formula would 8 provide. 9 А Correct. 10 Q Any over-order premiums are not going to be 11 accounted for either in your yield formulas, certainly not, 12 or in your make allowance. 13 А Right. 14 0 Where does that leave the cheese plant who wants 15 to buy milk away from a butter powder plant? 16 А I guess the thing is that the cheese plant would 17 buy that milk, take out the cream and sell it to that -- the 18 cream price is high. They need cream is what you are telling me. They might even pay a premium for it. And as 19 20 cheese-maker if I get that milk and I keep what I need to make my product, take out the cream that has a higher value 21 22 in that plant down the road and send them the cream --23 Okay. I think that is a good answer. Q А -- I take it. 24 25 Q Then what you are saying is you don't see a price

available -- you don't see a problem with the fact that the
 butterfat prices would be different for the two potential
 markets.

A I don't see a problem. I actually think it will make fat move to and away from a cheese-maker when the market needs fat and there is a higher price outside. The cheese-maker will have an incentive to give up fat and the reverse is true, also.

9 Okay. I will have to think about that before I Q 10 write my brief. Let's talk about the yields in broad scope 11 here. One of the points that you made in your formulas --12 in the derivation of your formulas is the need to consider 13 what a modern efficient plant has demonstrated in your 14 experience as the ability to obtain higher yields 15 essentially. Would you agree that the ability to recover 16 fat in the form of cheese or the ability to eliminate plant 17 losses, shrinkage, depends a little bit on the age of the 18 equipment and the cost of that equipment?

A The -- because there is things correlated with age in terms of design, that newer equipment that is well designed is likely to give better recovery of fat than older equipment that hadn't advanced in technology to the same level that the new equipment has.

24 Q Roughly -- in your experience, what would be the 25 time frame in which the more modern generation of equipment

1	evolved and where those higher yields if I can just broadly
2	use that term when those higher yields became possible?
3	A Okay. I guess if I go back to a paper that I
4	published that was based on a study that was done in the
5	late '70s, '78, '79, at that point in four factories in New
6	York State, the factory that had the best recovery in
7	cheddar cheese-making was getting around 89, 89.5 percent
8	fat recovery. And the factory that was getting the worst, I
9	think, was about 82. So substantially lower than the
10	numbers that we talk about today.
11	Q That was what year again, '79?
12	A That was back about '78, '79. Over a period of
13	time and really, I would say in the late 1980s, early 1990s
14	is where we really saw the introduction of completely new
15	designs of cheese vats in terms of the horizontal vats that
16	had a different method of cutting and agitation. And one of
17	the things that you see clearly in factories, that when they
18	switch to that type of design, the fat loss and the whey
19	goes down.
20	And the fat recovery in the cheese goes up in
21	cheddar cheese-making. So I would say that as we have
22	gotten into the '90s, it is dramatically different than what
23	the situation was in the late '70s and the first half of the
24	1980s in terms of fat recovery in cheese.

25 Q Do you have any information that would allow you

1 to compare the overall efficiency of a plant, let's say, 2 built before 1990 with those that have been built since 1990 3 with respect to other factors than just yield? 4 I guess with respect to other factors other than Α 5 yield, the key thing in terms of efficiency would be the economies of scale and the big increase in plant size. Adn б 7 that is not so much the efficiency of cheese-making and recovery of solids, but the efficiency with respect to the 8 9 pounds of cheese per man-hour, per unit of fixed cost and so 10 on. 11 Q Higher degree of capital cost. 12 А Yes. 13 And I agree with your point. And I will tell you 0 14 what I am going to argue from that. And then you can 15 comment if you wish. I am going to argue from that that a 16 plant study -- a plant cost study that uses the older plants 17 would have to assume a different yield that a plant cost 18 study that uses only newer plants and that we have a

difficulty here if we are to survey plants without drawing a distinction between the newer, more efficient, undepreciated plants versus the older depreciated plants. And at the same time, we have to consider then what yield factors would be used in the formula to harmonize the generations of equipment.

25 A I think when you talk about comparing old and new

1 plants and then you mention -- you say efficiency, an old 2 plant in terms of efficiency of yield, recovery of what was 3 in the milk as cheese could be doing very well. But where 4 their disadvantage will probably lie is that if they are an 5 old plant that hasn't expanded, that now they maybe used to be a reasonably sized plant and the scale curve has changed. б It has gone out to much higher capacities. 7 8 And now they have lost ground in terms of 9 efficiency with respect to cost per pound of cheese 10 primarily because of the scale difference, not that they are 11 worse cheese-makers in terms of recovering fat and protein 12 as cheese. That is probably a relatively minor difference. 13 It is the scale issues that I think would be the most 14 important. 15 MR. MARSHALL: That's helpful. That's helpful. 16 You know what, I think that covers what I wanted to cover. 17 I thank you very much. I look forward to --18 JUDGE HUNT: Well, it was very timely, Mr. Marshall. I was just ready to recess for the evening. So 19 20 Dr. -- yes, Mr. Cooper? MR. COOPER: Just some people asked me for a list 21 22 of the documents that were officially noticed, the USDA 23 documents yesterday. And there is a list in the back of the room on the table there. And there is plenty of copies. 24 25 JUDGE HUNT: I will also remind you if you --

there is a sign-in sheet for anyone who wants to sign up that hasn't signed in before as being present at the hearing. They can do that at the back of the room. Mr. Rosenbaum? MR. ROSENBAUM: Do I understand that Dr. Barbano б will re-take the stand tomorrow morning? JUDGE HUNT: You are going to be back, aren't you, Doctor? THE WITNESS: Yes. JUDGE HUNT: Yes. So we will resume the questioning at 8:00 tomorrow of Dr. Barbano. Have a very nice evening. Thank you. (Whereupon, at 6:00 p.m., the hearing in the above-entitled matter was adjourned until Wednesday, May 10, 2000 at 8:00 a.m.)

1 CERTIFICATE OF REPORTER, TRANSCRIBER AND PROOFREADER 2 Milk in the Northeast and Other Marketing Areas 3 Name of Hearing or Event AO-14-A69, et al.; DA-00-03 4 5 Docket No. б Alexandria, Virginia 7 Place of Hearing 8 May 9, 2000 9 Date of Hearing 10 We, the undersigned, do hereby certify that the 11 foregoing pages, numbers 322 through 639, inclusive, 12 constitute the true, accurate and complete transcript 13 prepared from the tapes and notes prepared and reported by 14 Sharon Bellamy, who was in attendance at the above 15 identified hearing, in accordance with the applicable 16 provisions of the current USDA contract, and have verified 17 the accuracy of the transcript (1) by preparing the 18 typewritten transcript from the reporting or recording 19 accomplished at the hearing and (2) by comparing the final 20 proofed typewritten transcript against the recording tapes 21 and/or notes accomplished at the hearing. 2.2 5-10-00 23 Date Bonnie Niemann 24 Name and Signature of Transcriber 25 Heritage Reporting Corporation 26 5-25-00 27 Date Lorenzo Jones Name and Signature of Proofreader 2.8 29 Heritage Reporting Corporation 30 5-9-00 31 Sharon Bellamy Date 32 Name and Signature of Reporter 33 Heritage Reporting Corporation