BEFORE THE UNITED STATES DEPARTMENT

OF AGRICULTURE

AGRICULTURE MARKETING SERVICE

In the Matter of Milk in California	7 CFR Part 1051
Notice of Hearing on a Proposal to	Docket No.: AO-15-0071
Establish a Federal Milk Marketing	AMS-DA-14-0095
Order	

LEPRINO FOODS COMPANY'S BRIEF AND PROPOSED FINDINGS AND CONCLUSIONS IN REGARDS TO PROPOSALS FOR A FEDERAL MILK MARKETING ORDER FOR CALIFORNIA.

Introduction and Summary

Pending before the United States Department of Agriculture ("Department") are proposals to promulgate a Federal Milk Marketing Order ("Order") for California. The hearing was held September 22 - November 18, 2015 in Clovis, California ("Hearing"). Leprino Foods Company ("Leprino") operates nine manufacturing facilities in the United States that produce mozzarella and closely related pasta filata style cheeses. Leprino either processes the whey at the same locations or transports the whey to another facility within the Leprino network for further processing. Three of the nine manufacturing facilities that Leprino operates within the United States are located in the state of California. Two of the three California plants process their own whey stream and the third fractionates the whey stream, processes the permeate and ships the retentate to another of our California plants for further processing. Leprino markets our cheese and whey products both domestically and internationally. Therefore, Leprino has a strong interest in the decision by USDA ("Department") as a result of this hearing. Leprino is

submitting this Brief to assist the Department in its analysis of the testimony provided at the Hearing if it deems that a California Federal Milk Marketing Order should be promulgated.

Leprino supports the entirety of the Dairy Institute of California proposal (Proposal 2). However, this brief is specifically focused upon issues related to the pricing of milk used for manufacturing of Class III and IV products. Evidence presented at the Hearing supports the following conclusions if the Department determines that an Order should be promulgated:

1. The Department should adopt Proposal 2 Class III and IV price formulas, as modified by Dairy Institute during the Hearing.
    a. Commodity prices used in the Class III and IV formulas should be based upon a survey of prices received f.o.b. manufacturing plants in the Western states. Alternatively, if confidentiality concerns preclude the Department from publishing such data, the prices should be calculated based upon the national NDPSR prices adjusted by the historic difference between those prices and the prices received in California as reported by CDFA.
    b. Manufacturing cost allowances in the Class III and IV price formulas should reflect the most current cost data relevant to the regulated geography available at the time of the hearing.
2. The Department should reject:
    a. Proposal 1 Class III and IV price formulas. These formulas are premised upon manufacturing costs that are a decade old and a price reference that overstates the location value in the marketing area for which an Order is being promulgated.
    b. Proposal 1 pool plant definition1051.7(c). This definition is over-reaching in its attempt to regulate all Grade A milk processed by manufacturers located in the Marketing Area (California) and is inconsistent with the established policy of the Department and contrary to the Agriculture Marketing Agreement Act.

Manufacturing Class Regulated Price Principles

The Class prices that apply to milk for hard product manufacturing (Classes III and IV) should be set no higher than the levels that are reflective of the value that can be returned through good management practices in the lowest value FMMO to which the regulations apply. Adherence to this basic principle is necessary to ensure that orderly marketing of milk is maintained.

The products represented in the formula should represent the most generic form of the products subject to that Class's price regulation. Those products must have clearly identifiable specifications that can be associated with prices received and the cost of manufacturing products of the same specifications. The product yields should represent the yields that are reasonably attained by the regulated entities and the make allowances should reflect at least the cost of converting milk into those products with a return on investment and marketing allowance.

The Class III and IV price formulas applicable to the existing FMMOs were established based upon the hearing record from the 2006 and 2007 Class III / IV hearings. California was not subject to FMMO regulation at the time of those hearings, so the scope did not incorporate the potential of price application within the geography of California. Additionally, the costs upon which the current formulas are based are from 2006, now a decade old. Therefore, the commodity price references and manufacturing costs must be revisited to ensure their ongoing relevance.

Additionally, this hearing record has established that the whey factor in the current Class III price formula overvalues whey relative to what can be achieved by many cheesemakers, both within and outside of California. Although Leprino believes that a national hearing should be held to correct these factors across the entirety of the system, the scope of this proceeding is limited to California. We urge the Department to adopt Class price formulas that are relevant to California in this proceeding, if the Department decides to approve an FMMO for California, and move forward on a timely basis to update the formulas on the national scale.

The Department should adopt the Dairy Institute (Proposal 2) Class III Formula.

The Dairy Institute Class III price formula proposal is based upon prices received and manufacturing costs in the proposed Marketing Area and should be adopted. Specifically, Dairy Institute proposes:

1. Commodity prices used in the Class III and IV formulas should be based upon a survey of prices received f.o.b. manufacturing plants in the Western states. Alternatively, if confidentiality concerns preclude the Department from publishing such data, the prices should be calculated as follows:
    a. cheddar block price = NDPSR national cheddar block price minus 2.24 cents
    b. whey price = NDPSR national whey price minus 0.63 cents
    c. butter price = NDPSR national butter price minus 2.18 cents
    d. nonfat dry milk price = NDPSR national nonfat dry milk price minus 2.44 cents
2. Manufacturing cost allowances in the Class III and IV price formulas should reflect the most current cost data available at the time of the hearing.
    a. The make allowance for cheese should be set no lower than 23.06 cents per pound of cheese.
    b. The make allowance for the other solids price calculation should be set no lower than 31.25 cents per pound dry whey equivalent to determine the concentrated liquid whey value (Dairy Institute's alternative proposal). If the concentrated liquid whey concept is not adopted, the other solids make allowance should be set no lower than 23.25 cents per pound of dry whey.
    c. The make allowance for butter should be set no lower than 17.39 cents per pound of butter.
    d. The make allowance for nonfat dry milk should be set no lower than 20.12 cents per pound of nonfat dry milk.
3. Yields should be as established through the extensive technical testimony in the 2000 and 2006 / 2007 Class III / IV hearings and as reflected by the Department's Final Decision published February 17, 2013. 78 Fed. Reg. 9248.

Product Form

All proposals under consideration at this proceeding use prices for cheddar cheese, Grade AA butter, whey, and nonfat dry milk to drive Class III and IV milk prices. However, Proposal 1 utilizes a combination of cheddar blocks and barrels and Proposal 2 exclusively utilizes cheddar blocks. Additionally, Proposal 2 includes an alternate whey valuation proposal that calculates a concentrated bulk liquid whey value based upon WPC-34 prices.

Cheddar. Cheddar cheese has formed the basis of regulated cheese milk end product price formulas since the California Department of Food and Agriculture ("CDFA") developed a separate Class 4b milk price formula in 1989 and USDA established the Basic Formula Price that utilized product prices to update the base month M-W survey price starting in June 1995. Cheddar cheese was historically the most common cheese produced and was the market clearing product within the complex as reflected by its inclusion in the Dairy Price Support Program at the time. The specifications for Cheddar cheese are clearly identified in FDA's standard of identity and large volumes of bulk cheddar cheese continue to be produced. Record evidence supports continuation of the use of cheddar to represent cheese value. Although some suggested that mozzarella should replace cheddar as the reference cheese, Leprino analysis concludes that *"the volume of mozzarella that would be reportable is roughly 60% of the volume of cheddar cheese production in California within the same period. Cheddar remains the dominant form of uniform bulk cheese produced in California."* Tr XXXI, p 6169: 6 - 10. (S Taylor). Additionally, *"the price for most commodity cheeses produced within the US is referenced to the price of spot cheddar cheese traded at the Chicago Mercantile Exchange (CME). "* Tr XXXI, p 6170: 17 - 20. (S Taylor).

Cheddar blocks are the relevant form of cheddar for California with virtually all bulk cheddar production eligible for NDPSR reporting in California being produced in the block format.

Hilmar is the largest cheddar producer in California and produces exclusively in the block format.

> *"I believe all of it is in 40 pounds, 640 pound bulk."* Tr XXIII, p 4527: 6 (DeJong)

Farmdale's cheddar production is similarly in the block format.

> *"We make a 40 pound block product solely."* Tr XXIV, p 4745: 23 (Hofferber)

Additionally, most other commodity cheeses, including mozzarella, are price-referenced to the block price on the CME for commercial transactions. No evidence was put forward in the Hearing record that cheddar barrels, eligible for NDPSR surveying, are produced in meaningful volumes in California. Therefore, use of the 40 pound block price in the formula is consistent with California production and returns.

Butter. Fat that is subjected to cheese making but is not bound into the cheddar cheese matrix (assumed to be 10% of the fat) is valued under the Class III formula at the grade AA butter value. This is a clear technical error in the existing formula but, given the magnitude of the overall proceeding, has not been addressed in any of the proposals under consideration at this proceeding. Nonetheless, the record evidence indicates that the valuation in the existing and proposed price formulas is not based upon industry experience.

> *"The current formula assumes that all of the fat received at the plant that is not captured in cheddar cheese is recovered and converted to grade AA butter.*
>
> *Whey cream outlets are very limited in California. Our whey cream sales from our California locations are generally to one of three markets, one in California that seems to have very limited demand and two in Wisconsin. Our prices net well below the CME AA market price regardless of outlet for our whey cream. Pricing in Wisconsin is at or below flat market (CME grade AA butter) depending upon the market conditions. The cost of transport on our whey cream delivered to Wisconsin exceeds $0.54 per pound fat. The number of buyers for whey cream nationally continues to shrink, placing additional downward pressure on whey cream returns as sellers are forced to ship whey cream greater distances to find markets. "* Ex 135, p 11 - 12 (S Taylor).

Marquez Brothers International separates the whey cream and dispositions it as animal feed.

> *Q. Okay. Do the solids include any fat?*
> *A. It does include the whey cream as well, so since we cannot recover the whey cream, if we don't do anything with the whey cream or the permeate, over 90 percent of the, of that solids that go into the whey is basically, basically give it away.*
> *Q. So all of the whey cream and most of the lactose, the lactose that doesn't end up with WPC 80 --*
> *A. Right, which is 85 percent of it.*
> *Q. -- so that lactose and all of the whey cream ends up in a truck somebody picks up, and takes it and use it however they will for animal feed; is that correct?*
> *A. That's correct, yes.* Tr XXIII, p 4675 - 4676: 14 - 1. (Vetne cross of Maldonado)

Whey. Whey is a challenging commodity to value within the milk pricing system due to the lack of uniformity by manufacturers to capture value, even when using best management practices. Due to the complexity of this issue, whey will be addressed in its own section later in this brief.

Commodity Price Survey Geography

Dairy Institute's primary proposal utilizes a western NDPSR price series for the price discovery mechanism for each of the product prices. The proposal also contains default equations to use as a surrogate if USDA determines that confidentiality concerns (either within or outside the new Western price region) limit the Department's ability to release a Western price series. USDA should consider defining an area that includes the Pacific states of California, Oregon, and Washington and only add contiguous states to the extent that the addition of those states contributes to the ability to eliminate the confidentiality constraints. The Department should not add states beyond the geography defined in the Dairy Institute proposal.

The default equations proposed by Dairy Institute for use in the event that confidentiality concerns to publish a Western price series cannot be otherwise overcome are calculated by comparing the relevant NDPSR survey prices with CDFA audited reports of prices received for the commodities in California.

The importance of rejecting a national weighted average price series as exists currently under the Class III price formula is elevated by the geographic (extreme Western) location of the milk to be regulated through this proceeding. Dr. Mark Stephenson of University of Wisconsin-Madison updated the US Dairy Sector Simulator ("USDSS") model and concluded that the difference in value of dairy commodities between the West and the Midwest and East are greater today than they were during various model runs over the last two decades. Ex 133. Data released by both USDA and CDFA, and manufacturing testimony corroborate that the values of dairy commodities are lower in the dairy-surplus regions of the West than in the Upper Midwest or in dairy-deficit regions of the East.

California manufacturing plants must compete for sales on a delivered price basis with manufacturers in other parts of the country. The landed price to a customer location must be competitive with those alternative supply sources. As a result, the net price to the manufacturer is reflective of that competition and the cost to transport the product to the customer. This may be manifested by the manufacturer arranging the transportation and pricing the product at the customer's location or selling f.o.b. manufacturing plant at a discount related to transportation cost to what would otherwise be a delivered price. In either case, California values are lower than values in parts of the country further east because more milk is produced in California than is consumed in California and surplus milk in the form of manufactured products is cleared into the deficit areas to the east.

This phenomenon was corroborated by several witnesses.

> *"Leprino's California production is sold worldwide. Over 13% of our California cheese production and nearly 90% of our California whey products are exported. Nearly half of our California cheese volume that is sold domestically is shipped east of the Mississippi. Much of this cheese is shipped into the milk and cheese deficit southeast market. The cost of trucking cheese from our California plants to the Midwest where many of our customers who produce frozen foods or shred and package cheese for retail distribution around the country are located is in excess of $0.10 per pound and the cost of trucking to the*

northeast and southeast is roughly $0.15 per pound, plus or minus a penny depending upon location. In order to compete for those customers, our pricing needs to be competitive with the alternative supply sources in other parts of the country, most importantly in the midwest." Ex 135, p 9 (S Taylor).

Saputo noted similar marketing patterns and costs.

"The argument that California cheese plants can afford to pay the same price as those in the Midwest is false, given the cost of doing business in California including transportation of product to the population centers in the East. It costs about 12 cents per pound to ship cheese from California to the Midwest and about 16 cents to the East Coast.

For the last five years that USDA NASS surveyed and reported Dairy Product Prices, Minnesota and Wisconsin cheddar block prices averaged about 9 cents higher than those of other states." Tr XXI, p 4234 - 4235: 19 - 5 (Dryer).

Manufacturing Cost Allowances

The rigidity of end product price formulas mandates that manufacturing cost allowances be set at a level that at least covers the cost of converting raw milk into the finished products used in the formula. Any level short of that risks the maintenance of willing plant capacity to clear the market.

The Department should adopt Dairy Institute's proposed make allowances as amended during the Hearing. The proposed make allowances are both consistent with the principle that the make allowance should reflect the most current cost data available and are consistent with USDA's methodology for establishing the cheddar make allowance from the 2008 Class III/IV Final Decision. Specifically, that Decision adopted a cheddar make allowance based upon the CDFA weighted average cost from its audited cost study released September 2007 (covering cheddar cheese plant costs for January through December 2006) of $0.1988 plus a sales and administrative cost allowance of $0.0015 per pound. The sales and administrative cost is added because none is captured in the underlying CDFA cost study. Additionally, the make allowances are consistent with costs experienced in California.

Specifically,

1. The make allowance for cheese should be set no lower than 23.06 cents per pound of cheddar.
2. The make allowance for the other solids price calculation should be set no lower than 31.25 cents per pound dry whey equivalent to determine the concentrated liquid whey value (Dairy Institute's alternative proposal). If the concentrated liquid whey concept is not adopted, the other solids make allowance should be set no lower than 23.25 cents per pound of dry whey.
3. The make allowance for butter should be set no lower than 17.39 cents per pound of butter.
4. The make allowance for nonfat dry milk should be set no lower than 20.12 cents per pound of nonfat dry milk.

Subsequent to the Hearing, CDFA released the cost study for 2014. That cost study revealed an additional $0.0064 increased cost per pound cheddar, $0.0119 increased cost per pound butter, and $0.0014 increased cost per pound nonfat dry milk from 2013 to 2014. A comparison of the recent CDFA weighted average manufacturing cost studies with those that were utilized in the formation of the current Class III make allowances reveals the importance of updating the make allowances.

By their nature, end product price formulas constrain manufacturers of the base commodities, achieving the yields and commanding the prices reflected in the survey, to breaking even with a very modest return on investment (calibrated to Moody's BAA corporate bond rate on net book value of assets - Ex 123, pp 8, 9, 11). With costs increasing 4.70 cents per pound butter and 3.47 cents per pound nonfat dry milk from 2006 to 2014, a California butter / nonfat dry milk producer would be unable to recapture nearly 50 cents of their cost on every hundredweight processed if make allowances were set at 2006 levels (the time period used to set current Class III / IV make allowances). While whey costs are no longer published by CDFA, assuming that

whey costs increased in parallel with nonfat dry milk costs along with the 3.67 cent increase per pound cheddar and 4.70 cent increase per pound butter means that a cheddar manufacturer would be unable to recapture nearly 58 cents of their cost on every hundredweight milk processed if make allowances were set at 2006 levels. Using the nonfat dry milk assumption as a surrogate for whey cost changes likely understates the cost increase; costs of whey processing costs in our Waverly, NY facility increased in excess of the nonfat change between those two periods.

CDFA Weighted Average Manufacturing Costs

						Class Price Impact per cwt.			
	Study Period			Change from 2006		Class III		Class IV	
	2006	2013	2014	2013	2014	2013	2014	2013	2014
butter	$ 0.1373	$ 0.1724	$ 0.1843	$ 0.0351	$ 0.0470	$ (0.0149)	$ (0.0199)	$ (0.1488)	$ (0.1992)
NDM	$ 0.1664	$ 0.1997	$ 0.2011	$ 0.0333	$ 0.0347			$ (0.2863)	$ (0.2984)
cheddar	$ 0.1988	$ 0.2291	$ 0.2355	$ 0.0303	$ 0.0367	$ (0.2921)	$ (0.3538)		
dry whey - - calc'd using NDM change						$ (0.1953)	$ (0.2035)		
Total per cwt						$ (0.5022)	$ (0.5772)	$ (0.4351)	$ (0.4976)

Hilmar, a large and efficient cheddar manufacturer, noted the shortfall.

> *"Current FMMO make allowances in the Class III and IV formulas were implemented in October 2008, over seven years ago. Furthermore, the data used in these allowances came from a 2007 hearing, which relied on even older data. As such, the current data is getting close to a decade old and new cost studies are needed in the formula. HCC costs for cheese and our expected costs for milk powder are not covered by these make allowances, while dry whey is difficult to judge because we make whey protein and lactose. Nonetheless, our lactose and whey protein costs have gone up considerably over this time."* Tr XXII, p 4422: 11-20 (DeJong)

Yields

The Hearing Record contains no testimony that supports changing the yield assumptions within

the Class III and IV hearings. The Department should adopt the yields that are part of the current Class III and IV formulas. These yields were refined over the course of the 2000 and 2006 / 2007 Class III / IV hearings and are based upon significant technical testimony.

Although Leprino continues to believe that the whey cream yield embodied in the Class III formula (valuing 10% of the plant fat at the grade AA butter price even though it is impossible to capture that full volume of fat as whey cream and it is illegal to label whey butter as grade AA butter), that issue will be deferred until a national Class III / IV hearing.

The range of fat capture and yields in California can be expected to be similar to that reflected in the hearing records that established the yield assumptions in the current Class III formulas. TR XXXI, p 6171. Prior CDFA hearings have established that the yields reflected in their manufacturing cost exhibit include vat fortification (cream and / or dry or condensed skim solids) and are not indicative of raw milk yields.

Whey Valuation

Ascribing a value to whey within the regulated milk pricing system represents the ultimate Gordion knot. While some cheese makers can create value-added products from the whey stream, the whey creates a disposal cost for others. The diversity of returns from the various whey products also creates challenges when identifying the product that represents the most generic form.

Whey processing is highly capital intensive. The extraordinarily high capital costs create a barrier to entry and makes ongoing economic operation of a whey processing facility economically infeasible for small cheese plants. In its raw form, dilute whey from a cheese vat has limited value in the marketplace. Skim whey, prior to condensing, is typically around 6% solids. At this low level of concentration, transportation costs quickly consume the market value above costs of processing. Some intermediate size plants can condense their whey for

more economic transport for further processing at a larger plant. However, the returns achieved for any intermediate products short of the finished whey that is used in the milk price formulas fall short of finished product value.

Much of the concern with the California producer community relative to CDFA's valuation of whey in the Class 4b formula subsequent to December 2007 has been rooted in a sense that they were being short-changed regarding whey valuation by comparison with their FMMO producer brethren. However, the FMMO valuation of whey has also challenged cheesemakers, even in the dense cheese producing state of Wisconsin, where whey consolidating and finishing outlets are much more readily available than in California.

The Wisconsin Cheese Makers Association focused upon this same concern in response to the Department's invitation for a Section 610 Regulatory Flexibility Act review of the impact of FMMOs on small businesses in early 2015. They concluded that the current Class III formula overvalues the whey revenue stream experienced by a majority of Wisconsin cheese makers. They recommend that the value of separated, wet whey would be a more appropriate measure of the whey stream value.

> *"Wisconsin Cheese Makers Association maintains information on whey processing by its members, with information voluntarily supplied by members. In Wisconsin, 78 cheese manufacturing sites informed the Association that dried whey is not produced at these locations. Among these 78 locations, 44 locations do nothing more than sell separated, wet whey to other dairy businesses or other whey processing plants. The other 34 cheese plants take only the first step in dry whey product processing and perform reverse osmosis and / or ultrafiltration on wet whey to produce a concentrated whey or a concentrated whey protein liquid product. The Association is aware of more cheese manufacturing sites in the state that similarly ship or process wet whey, but these firms have not voluntarily verified this information with the Association."* Ex 93, pp 2 - 3.
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> *"The majority of these Wisconsin cheese plants produce separated, wet whey, which is a lower value commodity than dried whey. This lower value revenue source is all that most Wisconsin cheese manufacturers have to cover the Class III other solids price they are obliged to pay dairy producers. This is a fundamental flaw in FMMO Class III milk pricing -*

a built-in discrimination against small cheese manufacturing businesses that cannot begin to afford the cost of dried whey manufacturing." Ex 93, p 4.

"The true, basic commodity that should be reflected in the Class III milk price formula is separated, wet whey. Dried whey is a value-added product produced by a small number of plants In the U.S. Separated, wet whey is generally purchased on a contract basis using a price that is a fraction of the price of whey protein concentrate containing 34 percent protein (WPC 34)." Ex 93, p 5.

Two Wisconsin cheese makers, Steve Buholzer of Klondike Cheese and Steve Stettler of Decatur Dairy, testified at the Hearing. Klondike ultrafilters the whey stream to 34% protein and utilizes reverse osmosis to concentrate it prior to shipping. The whey must be co-mingled with large volumes of other whey given its acid level (associated with Feta production). Klondike's whey revenue fell $0.65 per hundredweight milk short of the Class III valuation in 2014. Exhibit 124. Decatur is located close to a whey processor willing to accept warm whey. Their returns were $0.7114 per hundredweight below the FMMO Class III whey assumption in 2014 and $0.0676 below YTD through September 2015. Ex 125.

Pat Fish, Saputo's Wisconsin-based VP, Procurement, also corroborated that the whey valuation issue extends beyond California. In fact, the issue may be more acute in Wisconsin.

"I think Wisconsin's more magnified only because you have a large number of very small plants that have no form of whey processing, as compared to California where there are some smaller plants, but comparing the two percentage wise, the California plants are larger. But you still have whey being transported. It is just that there's more plants in Wisconsin that have whey to get transported." Tr XXVIII, p 5686: 5 - 10.

The problems associated with the Class III whey valuation became more readily apparent subsequent to the 2006 / 2007 Class III / IV hearing. The highest annual average contribution that whey made to the Class III price prior to those hearings was $0.76 per hundredweight milk (2001). The problems associated with the whey factor became more readily apparent with the price spikes later in 2007 and more recent years.

Many cheesemakers within California are unable to capture the full value of whey solids, as can be seen on CDFA's summary. Exhibit 96. Barry Murphy, a whey consultant working with several California cheesemakers, elaborated further on the industry profile.

> *"Of the 57 cheese plants in California, ONE (1) plant manufactures sweet whey powder (Kraft, Tulare), the next three (3) major cheese companies (Leprino, Saputo, Hilmar) process most of the whey solids into products other than the dry sweet whey factor in the Proposal 1 Class III whey valuation and for which the current markets are weak. Ten (10) other cheese companies process a liquid reverse osmosis (RO) whey or ultra-filtered (UF) whey for sale as liquid to animal feed, to other whey processors, and in four (4) of these plants. as dried whey protein. All 10 of these companies dispose of >85% of whey solids as animal feed at little or no value."* Ex 117.

Several cheese plants processing around 1 million pounds milk per day have invested in fractionation technology in order to harvest whey proteins and produce WPC-80, yet struggle to achieve the returns assumed in the Class III formula.

Marquez Brothers Inc ("MBI") invested in whey fractionation technology in 2005 in order to produce WPC-80 and has not yet broken even with their investment due to losses incurred from its opening through August 2007, a period during which the California Class 4b price fully valued whey, similar to the FMMO Class III formula. Their permeate is concentrated to 20% total solids, combined with their whey cream and sold for roughly a penny per pound solids for animal feed.

> *" The whey protein plant was completed in August 4, 2005, for an investment amount of approximately $20 million. Despite our multi-million dollar investment to alleviate the environmental problems associated with whey, we have not seen a return on that investment. Our total loss incurred from August 2005 to August 2007 mainly due to the whey component is approximately $7 Million. To date, we have not yet recovered from these losses and we are years away from ROI."* Ex 105, pp 4 - 5.

" Unfortunately the installation of whey evaporators and dryers is an extremely capital-intensive operation and subject to large economies of scale. Small and medium size cheese companies like MBI, don' t dry permeate/lactose fraction and don 't have the ability to fund a $35 million permeate drying facility so will be unable to capture revenues to keep up with the rising milk cost. Ex 105, p 3.

"*A. So the lactose feed goes through our own system, it is concentrated to about, I believe 20 percent, and 22, 22 and 20 percent. And that is, we have a company who comes there and picks up the lactose and hauls it and uses it for animal feed.*
Q. Does that represent a sale for you or is that something you pay the person to come pick up and dispose of?
A. It depends. It is a sale for us and it's less than a penny a pound. But it is, it -- we don't meet those targets of 20 or 22 percent solids, then they charge us to pick up that whey.
Q. Okay. Do the solids include any fat?
A. It does include the whey cream as well, so since we cannot recover the whey cream, if we don't do anything with the whey cream or the permeate, over 90 percent of the, of that solids that go into the whey is basically, basically give it away." Tr XXIII, pp 4674 - 4675: 25 - 19 (Vetne cross of Maldonado).

Cacique concentrates the whey protein and sells it in liquid form, for which there are limited outlets. They also concentrate the permeate but pay to dispose of it.

"MR. VETNE: What do you do with your whey?
MR. de CARDENAS: We process our whey.
MR. VETNE: Well, how do you process it?
MR. de CARDENAS: We run it through a membrane system.
MR. VETNE: And do what, after it is through the membrane?
What does it become?
MR. de CARDENAS: WPC-37 I think it is, and then we ship it, we sell that to a customer, and then we have our lactose hauled off.
MR. VETNE: Lactose, water-reduced lactose?
MR. de CARDENAS: Yes.
MR. VETNE: Run it through a reverse osmosis system or something before you have it hauled off?
MR. de CARDENAS: Correct.
MR. VETNE: Okay. And when it is hauled off, is somebody buying that lactose?
MR. de CARDENAS: Actually, it is a cost to us.
MR. VETNE: It is a cost? You pay somebody to remove it?
MR. de CARDENAS: Yes." Tr XXIV p 4888: 10 - 21 (Vetne cross of deCardenas)

MR. BESHORE: Mr. de Cardenas, this is just a follow up on the whey question that Mr. Vetne asked. Is the WPC-37 product dry or liquid?
MR. de CARDENAS: Liquid.
MR. BESHORE: Are there multiple options for selling that, like competing buyers that you can have some options, or how is that market?
MR. de CARDENAS: Right now it is very difficult, very challenging.
MR. BESHORE: To find a buyer?
MR. de CARDENAS: Yes.
MR. BESHORE: Have there been multiple outlets over the time you have been producing that product? Multiple buyers, potential buyers?
MR. de CARDENAS: No.
MR. BESHORE: You have only ever had one customer?
MR. de CARDENAS: We have had two." Tr XXIV pp 4902 - 4903: 2 - 14 (Beshore cross of deCardenas)

Farmdale Creamery formerly produced roller dried (popcorn or "RDW") whey for animal feed. Their inability to recover the full whey value incorporated in the Class 4b price formula in 2007 resulted in them discontinuing cheddar production for a week. They were able to get some short term relief that carried them through until CDFA removed full valuation of whey from the 4b formula. In 2013, they invested in fractionation technology and now produce dry WPC-80. However, with the downturn in the WPC-80 market, that investment continues to result in a loss. The whey losses alone were equivalent to 7.57 cents per pound cheese produced in the eight months preceding the hearing. Additionally, Farmdale concentrates the permeate for disposal as animal feed in liquid form. Ex 107, p7

Joseph Farms produces whey protein isolate and dispositions the permeate stream into animal feed.

" Permeate is a lot of lactose. It makes a good dressing for cattle feed, and you know, someday they may get into where they are doing something with it, but not at this point." Tr XXX, p 6107.

The diversity of returns achievable from the sale of bulk condensed whey make construction of a formula difficult. Some whey is concentrated using reverse osmosis ("RO") technology and

sold without concentration of protein using ultrafiltration ("UF") and other whey is ultrafiltered and the retentate is sold. Barry Murphy's testimony provides an overview.

> *3. RO whey solids are sold in liquid form by 2 plants in the State and achieves 50- 70% of the whey powder value minus freight costs. Longer distances separate plants further in California than most other states and thereby make freight costs a significant issue. For example. the LOL WPC-34 liquid haul from Orland, CA to Kings County, CA is over 300 miles at a cost of $1,200 per load or $0.12/lb. solids of WPC-34. The haul from Industry, CA to Tulare, CA is 192 miles at a backhaul cost of $475 per load or $0.04-$0.06/lb. of RO whey solids. Distances between plants and freight costs in California are such that there is no inter-plant movement of raw unconcentrated whey in the entire state when this is commonplace in Wisconsin.*
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> *4. Whey Protein Concentrate (WPC-34) liquid solids are sold by 3 plants in the state to dryers at 20-30 cents under (or at 50-70% of) the USDA Central/Western average of the Mostly series, WPC-34, delivered.*
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> *5. The smallest cheese companies, representing at least 70% of the 50+ cheese plants in the state, have no ability or economies of scale to process whey and actually pay up to $I.OO/cwt. to dispose of whey. I work with a small cheese company now that pays $250 per load of whey for disposal costs."* Ex 117, p3.

Some of the larger cheese companies incur additional transportation and logistics costs because they do not process all of their whey at the same location at which it is generated. Saputo aggregates the whey from all of its California cheese facilities into its Tulare facility for further processing. Tr XXI, p 4256. This includes hauling whey from the north Valley and Southern California. Leprino also hauls retentate from our Tracy facility to one of our Lemoore facilities, a distance of over 150 miles. Tr XXXI, p 6251.

The Dairy Institute alternative proposal values the whey component in its concentrated liquid bulk form. The proposal was developed based upon an evaluation of the production and pricing practices that exist amongst the cheese plants that are large enough to invest in partial whey processing capacity but for which investment in full whey processing capacity is

uneconomic. These plants attempt to recover the value of the intermediate liquid condensed product. The Dairy Institute proposal is a pragmatic compromise that acknowledges that elimination of the whey value from the Class III formula is unlikely, even though inclusion of the factor is inconsistent with the basic principle that the regulated price should be based upon the returns achievable under best management practices when manufacturing the most generic product forms within the Class being priced. It is important to note that it recognizes greater market value than is achievable by the forty-four California cheese plants noted on Exhibit 96 that do not have any whey processing capability. It is with that in mind that a ceiling price of $1.50 per hundredweight ($0.2542 per pound of other solids) is proposed.

Dr. Schiek developed the factors in the alternative proposal after surveying several people familiar with the production and trade of condensed whey protein. The make allowance was amended at hearing to $0.3125 in order to incorporate the $0.0015 marketing cost adjustment consistent with USDA prior methodology with CDFA cost data. CDFA cost data does not included a provision for sales costs. In summary, the proposed make allowance of $0.3125 is comprised of:

	$ per pound
NDM weighted average cost per pound from CDFA study	$ 0.1997
Incremental whey costs (FMMO whey less NDM make allowances)	$ 0.0313
Transportation allowance	$ 0.0500
Condensing and cooling costs	$ 0.0300
Marketing Allowance	$ 0.0015
Total	$ 0.3125

The preliminary results from the national whey survey that Dr. Mark Stephenson (University of Wisconsin, Madison) is conducting indicate that costs may be higher than assumed in the Dairy Institute Alternative whey proposal.

"Of the plants not processing a final product, about 15 percent are disposing whey by land spreading or fed to local livestock. All plants disposing of whey incur the hauling cost but some also pay to dispose of the whey beyond the cost of hauling. The average distance to dispose of whey was about 85 miles although some plants had options as close as 20 miles. Ex 133, p 11.

The remaining plants not processing a final product are selling or transferring whey in various forms to another plant. These plants averaged about 65 miles to the receiving destination but the range was from 2 to 250 miles." Ex 133, p 11.

"The average total solids was about 23 percent. The transportation cost to deliver a pound of solids in the average concentration of whey, the average distance, would be $0.88 ÷ 23 lbs = 3.83¢ per pound." Ex 133, p 12.

"The plants shipping this semi-processed whey averaged about 1 million pounds of milk per processing day. That volume of whey processed through ultrafiltration is estimated to cost about 60¢ per hundredweight of whey. The raw whey from these plants averaged about 6.7% total solids or about 8.96¢ per pound of whey solids processed ($0.60 ÷ 6.7 lbs)." Ex 133, p 12.

Obviously, there is quite a range of transportation distance these plants have reported. There is also quite a range of processing being done by plants transporting their whey to final product processors. But using average values, there is something like a 12.79¢ (3.83¢ + 8.96¢) cost per pound of solids being incurred by plants that are not processing their whey into a final product for sale. Ex 133, p 12.

The adjustment at the end of the Hearing by proponents of Proposal 1 to exempt small cheesemakers from mandatory participation in the Order does not sufficiently address the whey valuation problem. As noted by Dr. Mark Stephenson of University of Wisconsin at Madison:

"The smallest cheese plants are not trying to compete by producing commodity products. They are trying to produce differentiated cheese products whose value can carry the cost of discarded whey. It is the mid-sized cheese plants who are probably caught in the most difficult place -- too large to significantly differentiate a product and too small to afford a dryer." Ex 133, p14.

Dairy Institute's original whey valuation proposal (amended to use a make allowance of $0.2325 during the Hearing) was developed prior to the deep dive that led to the liquid WPC proposal discussed above and overvalues the whey returns achievable by many cheesemakers in California. It remains superior to the whey valuation in Class III formula in that the make allowance is brought current and it incorporates a cap to limit the damage to cheesemakers who cannot process the whey to a finished dry product.

USDA Should Reject the Cooperative's Proposed Class III / IV Price Formulas

The Department should not adopt the cooperatives' proposal (Proposal 1) for Class III and IV pricing. These formulas utilize decade old manufacturing cost allowances and establish value based upon national weighted average commodity prices that exceed prices received in California. The proponents of Proposal 1 did not enter evidence into the Hearing record specific to the relevance of the formula factors to California.

The price levels generated by the cooperatives' proposal have already proven untenable in a less onerous version. The price levels exceed those that were generated by the Class 4b formula did before December 2007, when overvaluation led to the financial difficulties and closure of cheese plants, three cheese plants being placed on the ineligible list for the Producer Security Trust Fund for failure to pay timely, and the sale of a proprietary cheese company referenced earlier in my testimony.

USDA Should Reject the Cooperative's Proposed Pool Plant Definition 1051.7(c).

The Proposal 1 pool plant definition 1051.7(c) is over-reaching in its attempt to regulate all Grade A milk processed by manufacturers located in the Marketing Area (California) and is inconsistent with the established policy of the Department and contrary to the Agriculture Marketing Agreement Act.

Requiring all milk, including milk used to manufacture Class II, III, and IV products to be subject to the minimum price regulations, is unprecedented within the Federal Order System. In combination with Proposal 1's overvaluation of milk for manufacturing, the proposal would be devastating to the proprietary manufacturing capacity in California and is certain to lead to disorderly marketing conditions. Additionally, the reduction of competition across manufactured product classes will contribute to greater ongoing price volatility than would exist under normal FMMO rules. That volatility and the lack of convergence in the value of the manufacturing complexes is harmful at all levels of the industry - - producer, processor, and consumer - - and hampers the industry's ability to remain a consistent exporter. It is critical that any Order promulgated as a result of this proceeding not impede the free flow of milk used for manufacturing .

Today's Industry Context

In today's domestic and international environments, it is more critical than ever that the minimum regulated pricing system influence be minimized. It is important that any Order promulgated as a result of this proceeding not bias milk allocation to one manufacturing complex over another.

Competition across the entire food complex for "share of stomach" is very high. Whether innovating a new dairy product or seeking dairy's space as an ingredient in the development of a new innovative food, it is important that dairy demand not be constrained by overly burdensome price regulations.

As the Department considers its decision from this hearing, it is important to ensure that a California Federal Milk Marketing Order facilitates rather than inhibits the collective industry's ability to leverage this opportunity. If the Department proposes an Order as the result of this Hearing, it should adopt Proposal 2.