

UNITED STATES DEPARTMENT OF AGRICULTURE

BEFORE THE SECRETARY OF AGRICULTURE

 In re:) [AO]
) Docket No. 15-0071
)
 Milk in California)
 _____)

VOLUME XXX

TRANSCRIPT OF PROCEEDINGS

November 4, 2015

Myra A. Pish, CSR No. 11613

397093



barkley.com

(310) 207-8000 Los Angeles
 (310) 207-8000 Century City
 (916) 922-5777 Sacramento
 (951) 686-0606 Riverside
 (212) 808-8500 New York City
 (312) 379-5566 Chicago

(415) 433-5777 San Francisco
 (408) 885-0550 San Jose
 (800) 222-1231 Martinez
 (818) 702-0202 Woodland Hills
 (347) 821-4611 Brooklyn
 00+1+800 222 1231 Paris

(949) 955-0400 Irvine
 (760) 322-2240 Palm Springs
 (702) 366-0500 Las Vegas
 (702) 366-0500 Henderson
 (518) 490-1910 Albany
 00+1+800 222 1231 Dubai

(858) 455-5444 San Diego
 (800) 222-1231 Carlsbad
 (800) 222-1231 Monterey
 (516) 277-9494 Garden City
 (914) 510-9110 White Plains
 001+1+800 222 1231 Hong Kong

1 APPEARANCES:

2 U.S. DEPARTMENT OF Office of the General Counsel
 3 AGRICULTURE: BY: BRIAN HILL, ESQ.
 LAUREN BECKER, ESQ.

4

5 U.S. DEPARTMENT OF ERIN TAYLOR, Dairy
 6 AGRICULTURE: Product Marketing Specialist
 LAUREL MAY, Marketing Specialist
 MEREDITH FRISIUS, Marketing Specialist

7

8 CALIFORNIA DAIRIES, Law Offices of Marvin Beshore
 9 INC., DAIRY FARMERS BY: MARVIN BESHORE, ESQ.
 OF AMERICA, INC., Hanson Bridgett, San Francisco
 LAND O'LAKES, INC.: BY: MEGAN OLIVER THOMPSON, ESQ.

10

11 DAIRY INSTITUTE OF Davis Wright Tremaine
 12 CALIFORNIA: BY: CHIP ENGLISH, ESQ.
 ASHLEY VULIN, ESQ.

13

14 HILMAR CHEESE JOHN VETNE
 15 COMPANY: JAMES DeJONG

16

17 CALIFORNIA PRODUCER Stoel Rives
 18 HANDLERS ASSOCIATION: BY: NICOLE HANCOCK, ESQ.
 BAO VU, ESQ.

19

20 SELECT MILK PRODUCERS: MILTNER LAW FIRM, INC.
 21 BY: RYAN MILTNER, ESQ.

22

23

24

25

---o0o---

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X - V O L U M E 30

WITNESSES IN CHRONOLOGICAL ORDER

DR. MARK STEPHENSON:

TESTIMONY READ INTO THE RECORD	5937
CROSS-EXAMINATION BY MR. ENGLISH	5971
VOIR DIRE EXAMINATION BY MR. BESHORE	5975
CROSS-EXAMINATION BY MR. ENGLISH	5978
CROSS-EXAMINATION BY MR. BESHORE	5997
CROSS-EXAMINATION BY MR. VETNE	6028
CROSS-EXAMINATION BY MS. TAYLOR	6047
CROSS-EXAMINATION BY MR. BESHORE	6057
CROSS-EXAMINATION BY MR. VETNE	6061
CROSS-EXAMINATION BY MR. VANDENHEUVEL	6070

JOE E. PARIS:

DIRECT EXAMINATION BY MS. VULIN	6078
CROSS-EXAMINATION BY MR. MILTNER	6091
CROSS-EXAMINATION BY MR. VETNE	6100
CROSS-EXAMINATION BY MS. OLIVER THOMPSON	6104
CROSS-EXAMINATION BY MR. MILTNER	6116
CROSS-EXAMINATION BY MR. VANDENHEUVEL	6118
CROSS-EXAMINATION BY MR. BESHORE	6122
CROSS-EXAMINATION BY MS. TAYLOR	6123
CROSS-EXAMINATION BY MS. MAY	6127

---o0o---

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X - V O L U M E 30

INDEX OF EXHIBITS

NO.	DESCRIPTION	I.D.	EVD.
133	TESTIMONY ON THE U.S. SPATIAL VALUE OF MILK BY DR. STEPHENSON	5936	5997
30	WORKSHOP FOR DAIRY ECONOMISTS & POLICY ANALYSTS BY CHUCK NICHOLSON & MARK STEPHENSON		5997
134	TESTIMONY OF JOE E. PARIS	6078	6091

---o0o---

1 WEDNESDAY, NOVEMBER 4, 2015 - - MORNING SESSION

2 JUDGE CLIFTON: We're back on record on November 4, 2015.
3 It is a Wednesday. It is approximately 9:00 in the morning.
4 We are in Clovis, California, and this is Day 30 of this milk
5 hearing.

6 My name is Jill Clifton. I'm the United States
7 Administrative Law Judge who has been assigned to take in the
8 evidence at this hearing. The evidence consists of the
9 testimony and the exhibits. We have, in the 30 days,
10 accumulated so far, I believe, 132 exhibits, and much excellent
11 testimony.

12 I would like now to take appearances of those regular
13 participants in the hearing, beginning with my fellow USDA
14 employees.

15 MR. HILL: Good morning, my name is Brian Hill, B-R-I-A-N
16 H-I-L-L, I'm an Attorney with the Office of the General Counsel
17 Marketing, Regulatory, and Food Safety Programs Division.

18 MR. CARMAN: Good morning, Clifford Carman, C-A-R-M-A-N,
19 Assistant to the Deputy Administrator, Dairy Programs
20 Agricultural Marketing Service, USDA.

21 MS. TAYLOR: Good morning, Erin Taylor, T-A-Y-L-O-R,
22 Marketing Specialist with Dairy Program.

23 MS. MAY: Good morning, Laurel May, with USDA AMS
24 Dairy Program.

25 MS. FRISIUS: Good morning, Meredith Frisius,

1 F-R-I-S-I-U-S, with USDA Dairy Program.

2 MR. SWENSON: Good morning, Virgil Swenson, V-I-R-G-I-L,
3 S-W-E-N-S-O-N, Assistant Market Administrator for the
4 Central Federal Order in Kansas City, and here on detail with
5 USDA AMS Dairy Program.

6 MR. SCHAEFER: Henry Schaefer, H-E-N-R-Y, S-C-H-A-E-F-E-R,
7 Agricultural Economist for the Upper Midwest Federal Milk
8 Marketing Order Federal 30 on detail with USDA Dairy Programs.

9 MS. BECKER: Good morning, Lauren Becker, B-E-C-K-E-R, I'm
10 an Attorney in the Office of the General Counsel.

11 MR. BESHORE: Good morning, Marvin Beshore, M-A-R-V-I-N,
12 B-E-S-H-O-R-E, counsel for the Proponents of Proposal Number 1,
13 California Dairies, Inc., Dairy Farmers of America, Inc., and
14 Land O'Lakes, Inc.

15 MS. OLIVER THOMPSON: Good morning, Megan Oliver Thompson,
16 Megan is M-E-G-A-N, I'm an Attorney with the law firm Hanson
17 Bridgett in San Francisco, H-A-N-S-O-N, B-R-I-D-G-E-T-T, and
18 I'm co-counsel for the proponents of Proposal Number 1.

19 MR. WEGNER: Thomas Wegner, T-H-O-M-A-S, W-E-G-N-E-R, I'm a
20 Dairy Economist with Land O'Lakes.

21 MR. JABLONSKI: Gary, G-A-R-Y, J-A-B-L-O-N-S-K-I,
22 Consultant with the Cooperatives of Proposal Number 1.

23 MR. ENGLISH: Good morning, your Honor, my name is
24 Chip English, C-H-I-P, E-N-G-L-I-S-H, I'm with the law firm of
25 Davis, Wright, Tremaine, where I used to have an office in

1 Washington DC. I'm here on behalf the Proponents of
2 Proposal 2, and I note that today is Day 30. Yesterday we
3 surpassed the Order 1, 2, and 4 hearing length from 1998
4 hearing of 28 days.

5 MS. VULIN: Ashley Vulin, A-S-H-L-E-Y, V -- as in Victor --
6 -U-L-I-N, also an Attorney with Davis, Wright, Tremaine,
7 representing the Dairy Institute of California.

8 MR. SCHIEK: Good morning, William Schiek, S-C-H-I-E-K,
9 Economist for the Dairy Institute of California, and I would
10 just like to comment in response to Mr. English, it's not a
11 competition.

12 MR. DeJONG: Good morning, James DeJong, D-e, J-O-N-G,
13 Dairy Policy Economic Analyst with Hilmar Cheese, dairy
14 farmer-owned manufacturer of cheese, whey, and milk powder.

15 MR. VETNE: John Vetne, representative for Hilmar Cheese.

16 MR. ZOLIN: Alan Zolin, A-L-A-N, Z-O-L-I-N, representative
17 for Hilmar Cheese.

18 MS. HANCOCK: Good morning, Nicole Hancock with Stoel
19 Rives, representing the California Producer Handlers
20 Association and Ponderosa Dairy.

21 MR. VU: Good morning, Bao Vu, that's B -- as in boy --
22 A-O, last is Vu, V -- as in Victor -- U, I'm with the law firm
23 Stoel Rives, and we represent the California Producer Handlers
24 Association and Ponderosa Dairy. Thanks.

25 MR. VANDENHEUVEL: Good morning, Rob Vandenheuvel,

1 V-A-N-D-E-N-H-E-U-V-E-L, here with Milk Producers Council.

2 And sitting in the back, the volume seems a little bit
3 lighter today than it has been, so just a note.

4 JUDGE CLIFTON: Would you like it a little louder? Yes?
5 All right. Let us increase the volume on the podium mic, and I
6 think mine as well. Yes. We're going to give a headache to
7 the USDA. Okay. Still need to have it up a little. This is
8 better, I can tell already. All right.

9 I would like now to invite any other person who is
10 either observing or participating who would like us to have the
11 proper spelling of your name.

12 MR. STEPHENSON: My name is Mark Stephenson, M-A-R-K,
13 S-T-E-P-H-E-N-S-O-N, I'm with the University of Wisconsin.

14 JUDGE CLIFTON: Thank you, Dr. Stephenson. All right. And
15 we have an observer that I would like to have come forward and
16 identify herself, if she would like to.

17 MS. SHEA: Just because you asked, your Honor.
18 Kelly Shea, K-E-L-L-Y, S-H-E-A, with the White Wave Foods
19 Company.

20 JUDGE CLIFTON: Thank you. All right. Is there anyone
21 else who would like to come forward? I see no others. Let us
22 go forward then, with announcements and preliminary issues.

23 MS. MAY: Laurel May with USDA. I found my cheat sheets
24 now you get to hear the whole thing.

25 Everybody's welcome to testify. If you would like to

1 testify, you may let one of us know and we'll get you into the
2 line up. If you would like to question any of the witnesses,
3 you may do so by approaching the microphone.

4 We are broadcasting via a live audio feed which can be
5 found at www.ams.usda.gov/live.

6 The court reporter is recording official transcripts of
7 this hearing which will be available approximately two weeks
8 after the end of each hearing week, and you can also access
9 these transcripts and exhibits at the AMS Dairy website.

10 We have copies of some of the exhibits in the back in
11 those two file boxes on that table if you would like to help
12 yourself to those. And everyone is welcome to enjoy the
13 refreshments that we have in the back.

14 Yesterday, at the end of the day, we had Mr. Zolin on
15 the stand, and I believe he was finished. And so this morning
16 I believe we're looking for Dr. Stephenson.

17 As a reminder, we will be moving this hearing to the
18 Piccadilly Inn at the Airport next week, and we plan to work
19 through Veterans' Day on Wednesday.

20 JUDGE CLIFTON: Yes, we'll work the whole week and
21 including Veterans' Day.

22 All right. A couple of preliminary matters that I
23 would like to mention. One is the docket number of the case
24 as it is known in the Hearing Clerk's Office in the United
25 States Department of Agriculture. In brackets, capital [AO]

1 docket number 15-0071. I would like to mention also that the
2 audio feed is available for anyone to record to use for your
3 own purposes. The USDA is not recording it, it's sent out via
4 a YouTube website, I believe, and it's not preserved anywhere
5 by USDA. There is a local business that is maintaining a
6 website with those captured audio feeds, Agribusiness
7 Publications. And so anyone is welcome to access their website
8 at www.my-dairyman.com in order to listen to audio feeds from
9 prior sessions.

10 The exhibits that have been posted to the USDA, let me
11 back up. The exhibits that have been posted to the AMS
12 website, AMS is the first part of that website, not USDA, are
13 also repeated on the my-dairyman.com website.

14 Are there any other preliminary matters, Mr. English?

15 MR. ENGLISH: Good morning, your Honor, Chip English. A
16 couple things.

17 First, which has now become standard, our sort of
18 expected schedule. And the Dairy Institute has one witness
19 today, we hope, which is Sue Taylor, if she gets on.
20 Dr. Stephenson is here but I don't want to claim him as our
21 witness since he has told us he's not appearing in favor of or
22 against any proposal. It remains my view that that will take
23 the day, and if it doesn't, I apologize. I don't want to
24 endorse this person, but there are no known's, there are no
25 unknowns, and there are unknown unknowns. And those all

1 encompass people who may have said they might show up, and
2 haven't. People who are here but their testimony is not ready,
3 and part of that's because I haven't had time to review it at
4 all, but we're doing the best we can, and that is our
5 expectation for today.

6 I would like to, before I sit down, bring up one other
7 issue. And I appreciate the fact, your Honor, that you brought
8 up in response to some Official Notice questions yesterday,
9 your view about hard copies. And it may just be, I'm sure
10 that's what you said five or six weeks ago, I can't find notes
11 on it, but then I didn't look. But it didn't resonate with me
12 the way it resonated at 3:45 this morning. And as it turns
13 out, Mr. Beshore and I have had conversation, and it turns out
14 Mr. Beshore was at least thinking along similar lines. I'm not
15 looking to resolve the issue today, and indeed I mentioned it
16 to you briefly procedurally off the record before we started,
17 but I do think that there's ways of looking at this maybe a
18 little differently that don't mean we don't kill a lot more
19 trees. And so, for instance, there are Federal Register
20 documents that are easily accessible, fixed in place and time,
21 there are decisions of the Secretary, most of which are the
22 Federal Register, and so I just want to raise the question of
23 maybe thinking about it a different way going forward, and we
24 might have proposal about that at a future day. So again, I
25 just wanted to, so everybody have the opportunity knowing that

1 that thought process is there and obviously we welcome other
2 input. But we're just concerned about making the record with
3 all of that so big and burdensome for carrying it around, and
4 not to mention the cost of copying. And some of this could be
5 that proponents of various proposals could get together at some
6 point and say, look, these are the ones we're going to take so
7 we don't show up with duplicate copies.

8 So anyway, I'm not trying to resolve the issue today,
9 and Mr. Beshore, you are certainly welcome to be heard, but I
10 just wanted to at least raise the issue.

11 JUDGE CLIFTON: Thank you, Mr. English.

12 MR. BESHORE: Marvin Beshore.

13 Just real quickly, two things. I have been notified, I
14 believe there will be a producer tomorrow, expecting to testify
15 maybe right after lunch, so just for everybody's notes with
16 respect to that.

17 On an official notice, Mr. English and I have talked,
18 we have got some, certainly some common views on how these
19 documents might be handled. I would add USDA publications to
20 the list of, to the category of Federal Register documents as a
21 category of officially noticed and noticeable documents which,
22 I think we really, well, I would certainly prefer that we not
23 need to reproduce for the record, and so I would ask at the
24 right time we'll ask that, you know, there be consideration
25 given to that. There may be some other categories too, but

1 those are the ones that come to mind, to begin with. And
2 certainly, I respect the thought behind your Honor's original
3 indication that if there's something that's officially noticed,
4 it should be available conveniently, and it should be known,
5 and readily identifiable precisely to anyone using the record.
6 I mean, I think that's, to me, that's the most, that's most
7 important thing that everybody knows what it is and there's no
8 question about what it is. So, anyway, with that, I'll stop.

9 JUDGE CLIFTON: Thank you, Mr. Beshore, I agree with you.
10 And after I said what I did about wanting copies of all the
11 officially noticed documents, I remembered that counsel have
12 already indicated that they would expect USDA to look at the
13 updated statistics when they are working on their recommended
14 decision, because there will be more information, including
15 perhaps what direction things are going. And so I don't mean
16 that the web sites that are noticed should be captured as a
17 snapshot in time, never to progress.

18 I am in agreement with Mr. Beshore that it should be
19 easy for everyone to find the officially-noticed documents.
20 And perhaps even if all you give me in paper is one page of the
21 website, the beginning page, which would have the website
22 information on it, and probably some title or something of that
23 nature. I'm also aware that the way web sites work, sometimes
24 you cannot type in the whole URL to get where you are going,
25 you have to know how to reach it in steps, and some, maybe that

1 might be a good way for you to identifying what's beneficially
2 noticed also, to describe the steps you go through to get to
3 the page that's of interest.

4 So, thank you. I'm glad you are all thinking about
5 this, and I will be flexible and will appreciate your input.
6 Any other preliminary matters? All right. I see none.

7 Dr. Stephenson, would you come forward, please, and
8 I'll swear you in.

9 We have received copies of Dr. Stephenson's testimony.
10 Is there anyone who still needs a copy? And Ms. Frisius, will
11 we be marking this as Exhibit 133?

12 MS. FRISIUS: Yes.

13 JUDGE CLIFTON: Thank you. I'm marking mine as
14 Exhibit 133.

15 (Thereafter, Exhibit 133, was
16 marked for identification.)

17 JUDGE CLIFTON: I'll swear you in in a seated position.
18 Will you raise your right hand, please?

19 Do you solemnly swear or affirm under penalty of
20 perjury that the evidence you will present will be the truth?

21 DR. STEPHENSON: I do.

22 JUDGE CLIFTON: Thank you. We need a little more volume on
23 Dr. Stephenson's mic. And would you state and spell your name?

24 DR. STEPHENSON: My name is Mark Stephenson, that's
25 M-A-R-K, S-T-E-P-H-E-N-S-O-N.

1 JUDGE CLIFTON: Thank you. And do you, in your statement,
2 describe what your Ph.D. is in?

3 DR. STEPHENSON: I will be happy to do that for you. My
4 Ph.D. is in the area of Agricultural Economics. I have a
5 Bachelor's and Master's degree in Dairy Science, and a second
6 Master's and Ph.D. in Agricultural Economics, from Cornell
7 University.

8 JUDGE CLIFTON: Thank you. At any time you want to deviate
9 from your written statement, you are welcome to. It might be
10 helpful if you tell us when you are doing that, because when
11 the court reporter is typing, later on she'll have the benefit
12 of your written statement as a guide.

13 I'm so grateful that you are here, Dr. Stephenson.

14 DR. STEPHENSON: Well, thank you, I wish I could say the
15 same, but -- no, I do appreciate being here. Thank you very
16 much for being able to get me on the stand today.

17 JUDGE CLIFTON: Certainly. And when you read your
18 statement, I would like you to include in your reading, all the
19 titles, including the one at the very top.

20 DR. STEPHENSON: All right.

21 This is my testimony on the U.S. Spatial Value of Milk
22 and Whey Practices in Cheese Plants.

23 My name, again, is Mark Stephenson, Ph.D., I'm the
24 Director of Dairy Policy Analysis at the University of
25 Wisconsin in Madison.

1 Introduction

2 Judge Clifton and personnel of AMS Dairy Programs, I'm
3 appearing before you to offer testimony relevant to the
4 promulgation hearing of a California Federal Milk Marketing
5 Order (FMMO). I am an Agricultural Economist currently
6 employed at the University of Wisconsin as the Director of
7 Dairy Policy Analysis. For more than 30 years, my work has
8 focused on the dairy industry, both at the firm and sector
9 levels. I have testified at several FMMO hearings over that
10 time period.

11 My testimony today is not as a witness in support of,
12 or in opposition to, any particular proposal, but rather to
13 offer comments and research results that have bearing on the
14 promulgation decision. Primarily, I would like to offer
15 incites into the spatial value of milk in California and across
16 the country, and to summarize current research into whey
17 processing practices of U.S. cheese plants.

18 Spatial Value of Milk

19 The background for my testimony derives from numerous
20 Federal Milk Marketing Order issues that were subject of
21 discussion in the mid-1990's. The Grade B milk supply had
22 declined to the point that the old Minnesota-Wisconsin,
23 (otherwise known as the M-W price survey) was being questioned
24 as a monthly price discovery method for FMMO's. The level of
25 Class I differentials were also being challenged in many parts

1 of the country. Members of Congress were discussing whether
2 the U.S. dairy markets should be combined into a mandatory and
3 single FMMO, including State Order regulation.

4 In response to these issues, the 1996 Farm Bill
5 provided guidelines and directed the Secretary of Agriculture
6 to complete modifications to FMMO's under a strict timeline.
7 Dairy Programs of the Agricultural Marketing Service (AMS)
8 contracted with the Cornell program on dairy markets and policy
9 to conduct research into alternatives for price discovery and
10 potential modifications of the Class I differentials. I was
11 the Associate Director for Outreach with the Cornell Program on
12 dairy markets and policy at that time and helped to develop the
13 U.S. Dairy Sector Simulator (the USDSS). This spatially
14 disaggregated model of the U.S. dairy industry provided
15 insights into geographic price relationships that were used by
16 AMS in developing their 1999 recommended decision for Class I
17 differentials across the U.S.

18 The U.S. Dairy Sector Simulator

19 The USDSS is a highly detailed mathematical spatial
20 optimization model, but at its core solves a fairly practical
21 problem: How to get milk from dairy farms to plants to be
22 processed into various dairy products and distribute those
23 dairy products to consumers in the most efficient way (lowest
24 cost) possible. The model takes the total milk supply, plant
25 locations, and product mix and consumer demand as it existed

1 for an individual month. It indicates how to move that farm
2 milk to plants via the existing road network and distributes
3 the finished products to consumers, also according to the road
4 network.

5 The Milk Supply Data

6 Data needs for the USDSS are significant. These data
7 include the amounts and composition of farm milk and dairy
8 products consumed, disaggregated by regions in the U.S., and
9 accounting for imports and exports. To represent the U.S. milk
10 supply where possible, we used county estimates of milk
11 production and composition. California is a state where those
12 values are available. Where those data are not available, we
13 use state values and estimate county level milk production from
14 agricultural census and FMMO data. We aggregate the data from
15 the 3,112 counties in the contiguous 48 states into 231 milk
16 supply regions, to reduce computational intensity of solving
17 such a spatially disaggregated model.

18 Footnote 1 indicates that there are some additional
19 maps that show the supply regions and points and other data
20 supporting this testimony, which can be found at a website
21 <http://DairyMarkets.org/CA>

22 Dairy Product Demand Data

23 The USDSS model is comprehensive: It includes all
24 sources and uses of milk and dairy components in the U.S. The
25 current structure includes 19 final and 18 intermediate product

1 categories. Intermediate product categories are those like
2 cream, condensed skim milk, nonfat dry milk, etcetera, which
3 can be used in the further manufacture of other dairy products,
4 such as cheese or ice cream. The final products are consumer
5 products such as fluid milk, yogurt, cheese, etcetera, which
6 satisfy domestic consumption or export sales. All dairy
7 products have different component requirements and some product
8 component values differ by region. For instance, California's
9 lower fat fluid milk is fortified with skim milk solids, as per
10 the state regulation.

11 A variety of data sources are used to determine per
12 capita demand for dairy products. For example, the Economic
13 Research Service (ERS) reports some calculations of dairy
14 product demand and other values are determined from route
15 dispositions of FMMO's. County-level demands are then
16 calculated based on per capita demand and population and then
17 aggregated into 424 demand locations.

18 Dairy Plant Data

19 As with the aggregation of milk supply and demand
20 location, dairy plants are represented at 628 locations.
21 Although there are more plants than this in the U.S., we use a
22 single location to represent multiple processing entities if
23 they are not actually geographically distant from one another.
24 Plants are constrained to process only the products that are
25 produced at any location (i.e., a fluid milk plant location

1 cannot process cheese).

2 The USDSS tracks and accounts for multiple components
3 in products. For example, a fluid milk plant that has excess
4 butterfat can send cream to a churn ice cream plant or other
5 manufacturing facility with the need of the cream. Of course
6 sending the cream from a fluid plant, also sends nonfat solids
7 to the receiving plant, requiring somewhat more milk than is
8 necessary to meet only the fluid needs.

9 Imports, Exports, and Stocks

10 USDSS uses three locations for port cities in the
11 Atlantic, Pacific and Gulf Coast regions. Imports and exports
12 products exactly match those reported in the months modeled.
13 Some dairy products are storable and accounted for in the model
14 as stocks, which can be increased or drawn upon as observed in
15 the months modeled.

16 Transportation Costs

17 A road network of actual road mileage connects all of
18 the supply, demand, plant, and trade locations in the model.
19 There are about 200,000 possible road routes connecting
20 locations in the USDSS. States also have differing gross
21 vehicle weight limits which restricts the size of loads
22 shipping raw milk or finished products that can be transferred
23 between some states. These limits are also represented within
24 the model.

25 The cost to assemble milk to a plant, ship intermediate

1 dairy ingredients from plant to plant, or to distribute
2 finished dairy products, are calculated for every road route.
3 Fuel and energy costs differ across the country, as do labor
4 costs, and are factored into our calculations. Transportation
5 costs are an important driver of the model outcomes, and as for
6 other information, are calculated for each month for which the
7 model is used.

8 The Primal Solution

9 The model's purpose is to find the least-cost
10 combination of assembling milk from farms to plants, processing
11 dairy products, and distributing them to meet domestic consumer
12 and export demand, while respecting a large number of
13 constraints imposed. Constraints include such things as cheese
14 or any other dairy product, can't be made without ingredients
15 that ultimately come from milk supplied by the farms
16 represented in the model. Another constraint is that finished
17 dairy products must contain the milk components and be provided
18 in the amounts that consumers in the region demand. Finally,
19 shipments can't exceed the road weight limits of any state.

20 There are two types of solutions that come from such a
21 model: A "primal solution" and a "dual solution". The primal
22 solution describes the physical flows of product through the
23 dairy supply chain network. The dual solution represents the
24 relative monetary values of milk and dairy products at each
25 model location.

1 We have assembled data and determined solutions for the
2 USDSS model for March and September 2014, representative of
3 flush and short months. An example of the primal output is
4 shown in Figure 1. In this figure, the green lines represent
5 milk assembly flows from farms to plants, which are represented
6 by the triangles. A triangle with no obvious green lines
7 simply represents a local milk supply. Orange squares
8 represent demand locations, and orange lines represent
9 distribution of finished products from plants to demand
10 locations. The yellow lines in Figure 1 are cream shipments.
11 The size of triangles, squares, and the weight of lines, gives
12 an indication of the relative volume shipped or processed.

13 Figure 2 shows the primal solution of cheese plants for
14 March 2014. Cost minimizing solutions favor a more local milk
15 supply and a more distant distribution of finished products
16 than is the case for fluid milk plants, shown in Figure 1.

17 Primal solution flow maps can be constructed for any of
18 the products in the model. Although we can constrain the model
19 to capacitate plants, we do not have complete information about
20 plant capacities. As such, we usually run the model with plant
21 locations able to process as much product at the processing
22 site as the model would choose to do.

23 JUDGE CLIFTON: Now, let me stop you there, Dr. Stephenson,
24 because we can now see these figures, Figure 1 and Figure 2,
25 and I would like us to have a chance just to try to see what is

1 here. You can tell me at what point in your written testimony
2 you want to walk us through an understanding of how to read
3 Figure 1 and Figure 2.

4 DR. STEPHENSON: I could do that right now, if you would
5 like, if that would be helpful.

6 JUDGE CLIFTON: That would be great. Yes.

7 DR. STEPHENSON: Again, these are the, what we would call
8 product flows that occur from the primal solution. And I'm
9 showing two different maps here that are indicative of two
10 different products. The Figure 1 shows the least cost fluid
11 milk processing location and flows. And this is for the
12 March 2014 solution.

13 So, once again, if you start at the farm level, the end
14 of the green line is where we would have farm milk represented
15 and moving toward a plant which is represented as a triangle.
16 So that triangle is showing you processing locations for fluid
17 milk that the model would like to process. And again, the
18 relative weight of those lines and the sizes of the triangle,
19 give you an indication at least of the size or volume of the
20 flows or processing at that location. The orange lines are
21 showing distribution of the finished fluid milk products. And
22 the orange rectangles are showing you the distribution
23 locations. So if we have a triangle that has no obvious green
24 lines going to it, it simply means that there is an adequate
25 local milk supply to feed that plant. In other words, milk is

1 moving short distances. It's still assigned a cost, even
2 though it is relatively short distance. This is one way of
3 displaying a tremendous amount of information that would be
4 difficult to do with all of the individual outputs that come
5 from a computer-run model like this. And likewise, if we have
6 a single rectangle represented in orange, it is just indicating
7 local distribution. But the distribution can be further from
8 that.

9 The Figure 2 is showing you the solution for the least
10 cost and American cheese processing locations and flows. And
11 the same sort of thing is shown here, that we have yellow
12 lines, which would indicate cream either coming from or going
13 to a plant. And we have the product flows of finished products
14 shown in orange. We don't show the locations here as
15 rectangles because it just gets messy to do that. But it is
16 obvious that the solutions for these two different kinds of
17 dairy products look very different.

18 This is what the model would choose to do as the least
19 cost solution. It doesn't try to solve for fluid milk first,
20 and then move onto another product category. It does all of
21 the products simultaneously. So this is, indeed, a least cost
22 solution for the global dairy system.

23 Now, I haven't included products or all months that we
24 could print from this particular publication, just because it
25 would probably overwhelm us with detail. But in the footnote 1

1 on page 2, where I indicate that you can access additional
2 maps, this is at the DairyMarkets.orgCA, there are some
3 additional maps there where you can look at September
4 solutions, for example, and you can look at some other product
5 solutions if you have an interest. These are the ones that I
6 felt were important for this particular hearing.

7 Although it is difficult -- I'm continuing the
8 testimony that I have written -- although it is difficult to
9 evaluate the degree to which the USDSS model matches actual
10 outcomes with available data, we can compare model-generated
11 volume of five dairy products to those produced in the regions
12 of the U.S. based on a monthly Dairy Products report that's
13 published by the National Agriculture Statistics Service. The
14 correlation between the model-generated regional production
15 quantities and the observed values in the report is greater
16 than .88 for all products evaluated in both months and as high
17 as .99 for many products such as cheese (those correlations are
18 very high). Moreover, the model results are not sensitive to
19 changes of plus or minus five percent in demand values or
20 estimated transportation costs. Both outcomes suggest a high
21 degree of confidence in the sensibility of the model outcomes.
22 In addition, the model has been used as the principal
23 analytical tool for two studies that have been published in
24 well-known international journals Food Policy and Environmental
25 Science and Technology (footnoted 2, with references to

1 Nicholson, He, Gao, and Gomez.) And so the USDSS has been
2 subject to both industry and peer review.

3 Figures 1 and 2 demonstrate that it is economically
4 efficient to have a great deal of cheese manufactured in areas
5 of relative surplus milk production when compared to other
6 products such as fluid milk.

7 The Dual Solution

8 The dual solution indicates the marginal value of an
9 additional unit of milk at a farm supply or plant location.
10 Conceptually, this can be thought of as follows: If you would
11 ask a fluid milk plant owner how much more they would be
12 willing to pay for another hundredweight of milk, they would
13 have to consider all of their options for other milk supplies,
14 and the cost of transporting that milk to their plant, and they
15 would have to consider the additional sales opportunities for
16 the finished product and the cost of distribution to those
17 locations. This value would never be more than the cost of
18 transportation from the closest supply region and it will be
19 minimal in some locations where there's plenty of milk or
20 little nearby demand. (Noted in bold for emphasis) Thus,
21 supply, demand, and transportation costs become the important
22 determinants of the relative spatial values of milk.

23 The USDSS dual values for fluid milk are what AMS
24 contracted with the Cornell Program on Dairy Markets and Policy
25 to provide in response to the issues identified in the 1996

1 Farm Bill. Results from the USDSS have been extensively used
2 by AMS Dairy Programs over the years as a resource in
3 consideration of hearings discussing changes in Class I
4 differentials.

5 In the original publication, (footnote 3, Pratt, James,
6 Phillip Bishop, Eric Erba, Andrew Novakovic, and Mark
7 Stephenson, Normative Estimates of Class I Prices Across U.S.
8 Markets, we do have a reference for that at:
9 [http://dairymarkets.org.PubPod/Reference/Library/Pratt,etal.07.](http://dairymarkets.org.PubPod/Reference/Library/Pratt,etal.07.1998.b.pdf)
10 1998.b.pdf

11 JUDGE CLIFTON: Dr. Stephenson, in that footnote you read
12 it as "U.S. markets" "prices across U.S. markets," would you
13 re-read that phrase?

14 DR. STEPHENSON: Yes, normative estimates of Class I prices
15 across U.S. milk markets.

16 JUDGE CLIFTON: Thank you.

17 DR. STEPHENSON: That is the title. Thank you for the
18 clarification.

19 In the original publication documenting Class I
20 differential estimates using 1995 data, it was noted, that
21 other dairy products also have spatial price relationships.
22 "Just as USDSS generates relative milk values at fluid
23 processing locations utilized in the optimal solution, it also
24 generates relative milk values at manufacturing locations."

25 Figure 7 of that document is displayed "a price surface

1 map" of model-generated cheese differentials in which,
2 "Generally, these values increase from low-valued areas in the
3 Northwest to high-valued areas in the East and Southeast." A
4 copy of that map is shown in Figure 3.

5 I might make note that this was scanned from the
6 original document which itself was scanned, and it is hard to
7 read those numbers on there, but I will try to provide at least
8 some interpretation of that in the text here.

9 The Class III price surface with the 1995 data, showed
10 that a difference of about 30 cents per hundredweight of milk
11 between Central California and a location like Chicago in the
12 Upper Midwest. I chose these two locations because they are
13 both regions of surplus milk which manufacture significant
14 quantities of cheese, and which are sold outside their
15 respective regions. Figure 2 demonstrates this and also shows
16 that the flows are generally from West to East and slightly
17 North to South. Another way to interpret that 30 cent
18 difference back in 1995, is that a Central California
19 manufacturer of cheese could not afford to pay any more than 30
20 cents less than a processor in the Upper Midwest and still be
21 competitive with Midwest cheese plants -- ceteris paribus,
22 meaning that all other things being equal.

23 It should be noted that spatial prices shown in the map
24 in Figure 3 have a fixed value added to each location and
25 should not be interpreted as the Class III price, or what would

1 have been the Basic Formula Price, at that time. It is the
2 difference in prices between location that is of importance.

3 I would note that the Figure 3 has the title U.S.
4 Model-Generated Cheese Differentials, May 1995.

5 JUDGE CLIFTON: And read again that title, the first part
6 of it, you said U.S., but it's more than just U.S.

7 DR. STEPHENSON: Excuse me, it is the USDSS Model-Generated
8 Cheese Differentials, May 1995.

9 Since the initial analysis --

10 JUDGE CLIFTON: If you could go back. You promised to help
11 us with this since we can't read the numbers. Do you know what
12 the numbers are, or did you at one point in studying it?

13 DR. STEPHENSON: Yes, I do. And, in fact, we can look up
14 the values of numbers at each of the locations. I provided the
15 one that I think is important to the discussion here. There is
16 a difference of 30 cents per hundredweight of milk between the
17 Central California region and Chicago, Illinois. And I use
18 those two locations because they are areas of surplus milk
19 supply and significant cheese manufacturing.

20 JUDGE CLIFTON: Thank you.

21 DR. STEPHENSON: And if you make comparisons with the
22 Figure 2, primal solution map, the flows of product, this would
23 indicate that plants will need to be competitive with one
24 another to serve those Eastern Coast markets, and this is the
25 difference in price that would achieve that sort of

1 equilibrium.

2 JUDGE CLIFTON: Thank you.

3 DR. STEPHENSON: Since the initial analyses of the 1995
4 data, the USDSS model has been updated to represent two months
5 of the year in each of 2001, 2006, 2011, and now for 2014.
6 Figure 4 shows the March 2014 solution for marginal cheese milk
7 values. Again, it is the difference in prices across the
8 surface that matters and not the absolute values shown. For
9 simplicity and interpretation, the lowest marginal milk values
10 in this map is shown as a zero dollar value.

11 The important item to note in Figures 3 and 4 is that
12 the difference in marginal value between Central California and
13 Chicago is now about 70 cents per hundredweight of milk. A
14 similar difference was observed in the analysis of data from
15 the September 2014. We have seen a steady progression from
16 that 30 cents difference in 1995 to today's value over time.
17 For instance, the 2006 model runs (footnote 4 is noted
18 Nicholson, Charles, Sources of Differences in California
19 Class 4b and Federal Milk Marketing Order Class III Prices
20 During 2007 to 2012, published in April of 2012, is a Briefing
21 Paper on the dairymarkets.org website) showed about a 60 cent
22 difference in the cheese milk price surface between the same
23 locations.

24 Figure 4's title is USDSS Model-Generated Cheese
25 Difference in Marginal Value of Milk at Cheese Plants from

1 Low-Value Point, March 2014, with Footnote 5 noted there. It
2 shows (values are shown only those regions of the U.S. where
3 the model predicts cheese processing to be located.)

4 That's why the bottom quarter or so of the U.S. map is
5 not being shown with values, because the model would not have
6 predicted that that would be optimal to process in those
7 locations.

8 The Evolution of Markets

9 Recall that supply, demand, and transportation costs
10 are the important determinants for relative spatial values of
11 milk. To help partition these changes in value over time, we
12 ran the March 2014 data using the same transportation costs as
13 used in the 1995 model runs. This showed that about half of
14 the difference in costs from 1995 to 2014 was due to higher
15 transportation costs, and half of it was due to changes in the
16 relative spatial locations of milk supply and demand for dairy
17 products.

18 In the 19 years from 1995 to 2014, California milk
19 supplies had increased by about 67 percent, and more generally,
20 in the western states, milk supplies had increased by more than
21 82 percent. Over this same time period, the California
22 population had increased by 23 percent and the western states
23 by about 34 percent. Clearly, milk production has increased by
24 much more than the local demand for milk and dairy products in
25 this region, diminishing the relative value of milk.

1 It is fair to recognize that per capita consumption of
2 milk and dairy products has also risen over that 19-year time
3 period. Taking into account the per capita demand for milk and
4 dairy products, California was about 7.2 billion pounds of milk
5 net surplus in 1995, and was about 18.7 billion pounds of milk
6 net surplus in 2014. The western states are about 34.4 billion
7 pounds net surplus as a region.

8 Figure 5 shows the change in the intensity of milk
9 production at the county level across the country for a recent
10 decade. That decade, by the way, is from 2001 to 2011.
11 Changes in milk production have clearly been occurring within
12 California as well as the rest of the country. It's important
13 to note that milk values California change, not just because of
14 what happens in California, but also because of what happens
15 outside of the state. Strong growth in milk production in
16 Idaho and other western states has had an impact on California
17 milk values, as well as their own internal growth.

18 The title for Figure 5 is the Change in Milk Production
19 Intensity from 2001 to 2011. And this was calculated at the
20 county level, so it shows more than just state changes in milk
21 production, it gives much greater detail than that.

22 In that Figures 5, there is a red line in the center of
23 the map with arrows which shows the centroids of milk
24 production by decade. A centroid is a geographically-weighted
25 average. This, too, demonstrates that milk production has been

1 moving to the west for at least the last five decades,
2 affecting the spatial value of milk. The weighted average
3 calculation, or centroid, requires a substantial change in
4 regional values to show a visible change in map coordinates.

5 Figure 5 shows that the Southeast has been losing milk
6 production, with the exception of a few isolated pockets in
7 Florida and Georgia. AMS Dairy Programs recognized this when
8 it announced a tentative final decision, in February, 2008, to
9 raise Class I differentials in the Appalachian, Florida, and
10 Southeast Milk Marketing Orders. A fundamental conclusion from
11 these analyses is that spatial milk values for milk, or spatial
12 values for milk cannot be considered static for long periods of
13 time, and this has implications for minimum regulated prices.

14 Minimum Class Prices

15 The Federal Milk Marketing Order system has tried to
16 mimic what an Economist would call a "competitively determined
17 price" with the tools of classified pricing and pooling. The
18 spatial value of milk is recognized in Class I differential
19 values, but for many years all other classes of milk have had
20 identical regulated minimum values across the country at the
21 same point in time.

22 Economists often draw a graph with supply and demand
23 lines. The intersection of these lines would represent a
24 combination of price and quantity where dairy markets would
25 equilibrate the quantity produced exactly matches that which

1 buyers wish to purchase. This is the competitively determined
2 price that is the target for price regulation. As a practical
3 matter, markets are ever-changing and we cannot observe those
4 equilibrium price quantity values in anything like real time.
5 A practical solution to this problem is that FMMO's have
6 regulated minimum prices that must be paid and have tried to
7 set that standard somewhat below market clearing price.

8 The combination of a low enough price mover and
9 geographically different Class I values has historically
10 allowed blended pool values to represent an approximate spatial
11 price for producer milk. Any differences could be made up with
12 voluntary premiums paid above the regulated minimum. A real
13 concern is with minimum pricing setting the regulated level
14 above the market clearing price. At that point, producers are
15 willing to supply more milk to markets than consumers wish to
16 purchase. This would certainly be evidence of "disorderly
17 marketing".

18 This has occasionally happened in the Pacific Northwest
19 and less frequently in other FMMO's. However, because most of
20 the milk in these regions is cooperatively marketed, the
21 cooperative can, under FMMO regulation, reblend the lower milk
22 price back to its member owners. The same mechanism cannot be
23 implemented for proprietary transactions.

24 The concern with a California FMMO is that our current
25 product price formulas may not set the Class III minimum price

1 low enough to allow the western markets to clear on a regular
2 basis. Higher transportation costs and additional surplus milk
3 supplies suggest that the competitive price difference between
4 the major cheese producing region of the country have grown.

5 Two solutions present themselves to assure orderly
6 markets. One is that minimum price be calibrated to be just
7 below the lowest value of milk in the country. The other is
8 that regional manufacturing prices differ by enough to reflect
9 the geographic market values. The problem with a flat but
10 lower minimum price is that the price may be so low in the
11 higher value regions of the country as to be meaningless if
12 premiums are asked to carry too much of the value. A better
13 solution may be to reflect the regional price variation with a
14 price surface as we do in Class I milk.

15 As recently as the early 1990's, we did not have a
16 Class IV milk price. However, in 1993, USDA separated
17 manufacturing milk prices into Class III (milk used for cheese)
18 and Class IIIa (milk used to make nonfat dry milk). The IIIa
19 price was regionally different and used a product price formula
20 driven by the Central States nonfat dry milk powder price for
21 states east of the Rockies, and the Western nonfat dry milk
22 price which was generally 2 to 6 cents per pound lower for
23 western states. Product price formulas with regionally
24 distinct product prices could serve the purpose.
25 Alternatively, a manufacturing price differential could be

1 added to the class price mover, as long as the class price
2 mover reflects a spatial value below the lowest level.

3 I would like to move now to talk a little bit about
4 whey practices in the U.S.

5 The price of whey can have a great impact on producer
6 prices and input costs for cheese manufacturers. Indeed, whey
7 prices have been at the center of much of the discussion of
8 California milk price issue. On the one hand, producers paid
9 under the California State Order have argued that the value of
10 dry sweet whey has not been fully captured in the 4b milk
11 price. California plants, on the other hand, have argued that
12 very little dry sweet whey is produced in the state, and many
13 smaller plants regulated in FMMO's have complained that they
14 are being charged for the value of whey but not able to capture
15 that value in product sales.

16 I'm in the process of surveying cheese plants across
17 the U.S. to better understand the current utilization of whey
18 in this country. Although I am still receiving responses from
19 plants, I thought that it might be useful to provide a summary
20 of participants responses to date.

21 Descriptive Statistics

22 To date, I have received 88 responses to the survey,
23 some are not yet complete and have been excluded from this
24 report. There are 62 completed surveys that I will use to
25 characterize U.S. plants. These 62 plants are located in 16

1 states. Table 1 describes the range of processing volumes, and
2 Table 2 shows the status of plant regulation.

3 Title for table 1 is: Number of Cheese Plants by Milk
4 Volume in a Processing Day.

5 First category is less than 100,000 pounds of milk per
6 day. There were 11 respondents in that category.

7 Between 100,000 and 1 million pounds of milk per day,
8 16 respondents.

9 Between 1 million and 3 million pounds of milk per day,
10 23 respondents. And more than 3 million pounds of milk per
11 day, 12 respondents.

12 Table 2 describes the regulation of these cheese plant
13 respondents, those who indicated that they were a Federal Order
14 pool plant numbered 26; those who purchased milk from a
15 cooperative who pools the milk were 14; those who are regulated
16 under a State Order were 13; and unregulated cheese plants were
17 9.

18 12 of the plants received whey from other plants to
19 process along with the whey produced in their own cheese
20 operation. Not surprisingly, all of the plants processing less
21 than 100,000 pounds of milk per day are selling or disposing of
22 all of their whey.

23 JUDGE CLIFTON: I would like to interrupt, if I may. We're
24 at the top of page 11, and you read it a little bit different
25 from what's written. So when plants buy whey, are they buying

1 it for their cheese operation?

2 DR. STEPHENSON: They are buying it for their whey
3 operation to further process into a final product that's
4 distinct from cheese. So if they have the equipment and
5 capacity to produce a final dried whey product, they may also
6 have the capacity to process more whey than they are producing
7 in their cheese operation at that location.

8 JUDGE CLIFTON: Thank you. Would you read that page again
9 from the top?

10 DR. STEPHENSON: Yes, I will read it as written.

11 Twelve of the plants receive whey from other plants to
12 process along with the whey produced in their own plant. Not
13 surprisingly, all of the plants processing less than 100,000
14 pounds of milk per day are selling or disposing all of their
15 whey. 15 percent of plants processing from 100,000 to 2
16 million pounds of milk per day, process a portion of their whey
17 into some form of product for sale.

18 83 percent of plants processing more than 2 million
19 pounds of milk per day, are processing some or all of their
20 whey into a final product for sale.

21 Of the plants not processing a final product, about 15
22 percent are disposing whey by land-spreading or fed to local
23 livestock. All plants disposing of whey, incur the cost, or
24 the hauling cost, but some also pay to dispose of the whey
25 beyond the cost of hauling.

1 The average distance to dispose of whey was about 85
2 miles, although some plants had options as close as 200 -- or
3 20 miles.

4 The remaining plants not processing a final product are
5 selling or transferring whey in various forms to another plant.
6 These plants averaged about 65 miles to the receiving
7 destination, but the range was from 2 miles to 250 miles.

8 Figure 6 shows the distribution of distance for the
9 plants in the box plot. The title of Figure 6 is:
10 The Distance From Cheese Plant to Whey Processing or Disposal.

11 And I might describe what the box plot shows. These
12 are often called box-and-whisker plots. The central box area
13 that has a gray bar in the middle of it, shows the middle 50
14 percent of observations that we have in plants, and the two
15 smaller boxes which make up the one larger box, are 25 percent
16 of the observations. The line going to the whisker at the
17 bottom, or the line going to the whisker at the top, are
18 showing the 25 percent of plants in that particular range, or
19 those two ranges. And the circles that are shown above are
20 statistical outliers, they are plants that are sending milk an
21 unusual distance from the remainder.

22 That gray shaded area in the middle gives you a 95
23 percent confidence interval of where the true mean or average
24 of the distribution of whey processing occurs.

25 Using a cost --

1 JUDGE CLIFTON: Excuse me, and looking at that, the main
2 distance is from 30 miles to 60 or 70 miles?

3 DR. STEPHENSON: A little more than 70 miles, that's
4 correct.

5 JUDGE CLIFTON: Okay. Thank you. That's a wonderful
6 graph. Thank you.

7 DR. STEPHENSON: Using a cost of transportation model that
8 was developed at Cornell University (footnote 6, Pratt,
9 Wasserman and Trerise, Milk Hauling Cost Analysis Version 2,
10 March 1994, Cornell University. Also available at the
11 dairymarkets.org website) and it has since been updated to
12 Version 4, I have estimated the hauling cost per hundredweight
13 of whey in a fully loaded tractor trailer. Hauling is
14 estimated to cost about \$1.79 per hundredweight for the
15 250-mile destination, 46 cents per hundredweight for the 2-mile
16 destination, and about 88 cents per hundredweight for the
17 average 65-mile destination.

18 Virtually all of the cheese plants are separating the
19 cream from the whey stream. Many of the plants transporting
20 the whey to an aggregator or other plant for final processing,
21 do some initial processing of the product. 54 percent are
22 pasturizing the whey, and about 69 percent are cooling the
23 whey. 87 percent are concentrating the whey by reverse osmosis
24 and/or ultra-filtration processes prior to shipment. Figure 7
25 shows the total solids in the whey products shipped from the

1 cheese plants to other plants for further processing. The
2 average solids was about 23 percent. The transportation cost
3 to deliver a pound of solids in the average concentration of
4 whey, the average distance, would be 88 cents divided by the 23
5 pounds of solids, or 3.83 cents per pound of solids.

6 Figure 7, which shows this distribution, is entitled
7 Percent of Solids in Whey Shipped for Further Processing.
8 Again, I would note that the range here is from a little less
9 than 7 and a half percent to a little more than 45 percent.

10 A few years ago, I conducted a study of the costs of
11 ultra-filtration of milk. There were a significant economies
12 of scale in those plants. Figure 8 shows the processing costs
13 that were estimated at various plant sizes for concentration to
14 about 3 times (3x) its initial solids content. This 3x
15 concentration is about the average of the plants reported in
16 Figure 7.

17 Plants shipping this semi-processed whey averaged about
18 one million pounds of milk for processing day. That volume of
19 whey, processed through ultra-filtration, is estimated to cost
20 about 60 cents per hundredweight of whey. The raw whey from
21 these plants averaged about 6.7 percent total solids or about
22 8.96 cents per pound of whey solids processed (that would be 60
23 cents divided by the 6.7 pounds of solids.)

24 Obviously, there's quite a range of transportation
25 distances these plants have reported. There's also quite a

1 range of processing being done by plants transporting their
2 whey to final product processors, but using average values,
3 there is something like a 12.79 cents (which is the 3.83 cents
4 plus 8.69 cents) cost --

5 JUDGE CLIFTON: 8 point what?

6 DR. STEPHENSON: 8.69 cents, that was the cost of
7 transportation.

8 JUDGE CLIFTON: And is that what you have got written here?

9 DR. STEPHENSON: I do. In fact I --

10 JUDGE CLIFTON: I'm seeing 8.96 instead of 8.69.

11 DR. STEPHENSON: You're right, excuse me, this is a typo,
12 if that was the case.

13 JUDGE CLIFTON: Okay. Do you have -- let's see, 8 --

14 DR. STEPHENSON: No, 8.96 was the cost for processing the
15 total solids in the ultra-filtration per pound of whey solids,
16 noted in the paragraph above. And shown down here is 8.96
17 cents again in that formula to get to the 12.79 cents total
18 cost.

19 JUDGE CLIFTON: Okay. Good. So begin again with the
20 sentence, last sentence on page 12, if you will, the word but.

21 DR. STEPHENSON: But using average values, there is
22 something like a 12.79 cents, which would be 3.83 cents plus
23 8.96 cents, cost per pound of solids being incurred by plants
24 that are not processing their whey into a final product for
25 sale.

1 I have taken the other solids value per pound, as
2 announced by AMS, from January 2000 to September 2015, and
3 added the additional average transportation and processing cost
4 calculated above, which was 12.79 cents, to them. They are
5 displayed in the histogram in Figure 9. This graphic shows the
6 frequency of the estimated value per pound of solids that a
7 cheese maker would need to recover in the transaction with
8 final whey product processor to break even.

9 That Figure 8 above Figure 9, first, let me read the
10 title of that, which is: The Processing Costs per
11 Hundredweight of Milk in Ultra-Filtration Plants. And Figure 9
12 is: The Frequency of Cost per Pound of Other Solids Processing
13 and Transportation from January 2000 through September 2015.
14 And it goes from a low of 5 cents per pound, up to 75 cents per
15 pound.

16 JUDGE CLIFTON: So help me understand Figure 9, if you
17 will, Doctor. The dates, since it covers about 15 years, the
18 dates are represented how in this Figure 9? What is the most
19 recent experience?

20 DR. STEPHENSON; the most recent experience would be
21 September 2015, and I don't recall, I would have to look at a
22 price announcement by the Federal Milk Marketing Orders what
23 that whey price was for that particular month, but there would
24 have been an other solids value that a cheese maker would be
25 paying for in the milk that they received. And that's what's

1 indicated here, plus that 12.79 cents for the processing and
2 transportation to the final whey manufacturer.

3 JUDGE CLIFTON: And so when we say "frequency of cost" are
4 the highest bars the ones that the cost that have most
5 frequently occurred?

6 DR. STEPHENSON: That is correct. So, for example, around
7 that 15 to 20 to 25 cents we see several bars or observations,
8 about 30 months in each of those, where we would have seen
9 prices like that. And, you know, relatively fewer, there's
10 another spike in prices a little bit later around the 50 cents
11 in total. This, again, would have been the cost of the other
12 solids purchased by the cheese plants, and it would also
13 include that 12.79 cents.

14 JUDGE CLIFTON: So does this represent what the cheese
15 plants had to pay because of a component pricing formula or
16 something else?

17 DR. STEPHENSON: It represents two things. It represents
18 what they would have had to pay by that component pricing
19 formula, and it represents my estimate of the current costs of
20 transportation and processing in average cheese plants. So, in
21 other words, for a plant that has to do something with their
22 whey and can't process that to final product, it represents,
23 you know, the cost of both purchasing the ingredient, doing the
24 processing, and sending it to someone who can transform that
25 into final product. I am sorry about the confusion on the

1 graphic.

2 JUDGE CLIFTON: No, this is excellent information that we
3 have been trying to figure out witness by witness. And your
4 data to produce this came from what?

5 DR. STEPHENSON: The data comes from Federal Milk Marketing
6 Order price announcements, where they announce the price of
7 other solids, or have since January of 2000.

8 JUDGE CLIFTON: But what we haven't been able to get at
9 yet, until you brought this chart, is the processing cost. Is
10 that from your survey?

11 DR. STEPHENSON: This is from work that has been done in
12 very recent years. The ultra-filtration, and I would certainly
13 want to suggest that this is only one process that plants can,
14 or do, use. This is not reverse osmosis, for example, a
15 different process, this is only ultra-filtration. It can take
16 those plant, or the solids in a whey stream to about the
17 average levels that we were seeing in the survey being shipped.
18 But obviously, there's a very wide variety of experience that
19 plants are doing in the transformation of their product. This
20 gets them to about an average value. Some plants are shipping
21 raw whey product that's maybe pasteurized and probably cooled,
22 but not otherwise processed. So there can be quite a
23 distribution of costs. This is simply representative of an
24 average set of values.

25 JUDGE CLIFTON: Thank you.

1 DR. STEPHENSON: Top of page 14, then.

2 The survey has indicated that there are several methods
3 employed to arrive at a value for whey sold, whether raw or
4 partially processed, that is transferred from a cheese plant.
5 Table 3 shows the percentage of responses to several of the
6 methods used.

7 Table 3's title is: The Method Used to Determine a
8 Value for Whey Sold to Another Plant.

9 The first category is, and not ranked by percentages,
10 but just the first line on the Table 3. On a solids basis as a
11 percentage or multiple of publicly reported whey price --

12 JUDGE CLIFTON: Read that phrase again, of publicly
13 reported?

14 DR. STEPHENSON: A Publicly reported dry whey price, 28
15 percent of respondents indicated that that was the way they
16 determined value sold to another plant.

17 There were no respondents who indicated that they
18 determined value on a solids basis as specified discount or
19 premium applied to a publicly reported dry whey price.

20 4 percent of respondents reported that they did it on a
21 solids basis as a percentage or multiple of a publicly reported
22 whey protein concentrate, 34 price.

23 20 percent reported that it was on a solids basis as a
24 specified discount or premium applied to a publicly reported
25 WPC 34 price.

1 20 percent indicated that it was just on a liquid basis
2 per hundredweight.

3 And 28 percent said other. And for other, I asked them
4 to respond, and most often it was explained as a simple fixed
5 price per pound of solids.

6 I didn't ask respondents to provide any specific
7 formulas so I cannot deduce what their income was relative to
8 the costs they might have incurred.

9 In summary, I have many friends and acquaintances
10 employed in the California dairy industry, producers,
11 cooperatives, and processors, and I'm well aware of the
12 problems they have been addressing over the last several years.
13 It's my measured opinion that there has been room for higher
14 milk price for producers than was regulated by the California
15 State Order. But it is my caution to regulators when
16 considering the implementation of a uniform manufacturing price
17 from coast to coast, that markets will punish a price that is
18 above market clearing levels. I would fear that imposing our
19 current Federal Order Class III product price formula upon the
20 California dairy industry could, over time, affect cheese plant
21 profitability sufficiently to cause a significant shift in
22 ownership of cheese plants from proprietary firms to
23 cooperative structure, where losses can be reblended back to
24 members.

25 As long as product price formulas are used for milk

1 price regulation, the value of whey is likely to be a
2 controversy. Dairy farmers demand to capture whey's value in
3 the regulated price. If whey products were valuable enough,
4 like the cheese co-product, small and medium-size plants might
5 be able to afford the capital investment necessary to capture
6 the value of whey. However, only the largest plants are able
7 to invest in today's drying technology.

8 The smallest cheese plants are not trying to compete by
9 producing commodity products. They are trying to produce
10 differentiated cheese products whose value can carry the cost
11 of discarded whey, but it's the mid-sized cheese plants who are
12 probably caught in the most difficult place--to be large, too
13 large to significantly differentiate a product and too small to
14 afford a dryer.

15 I don't have answers to many of the concerns raised by
16 the stakeholders in the California dairy industry, but I have
17 done enough research with this sector to be convinced that
18 spatial prices and whey values should be carefully considered
19 by regulators.

20 And that was the end of my prepared statement.

21 JUDGE CLIFTON: Dr. Stephenson, this is a remarkable
22 document and I thank you for it. I think we'll take a little
23 break before we have cross-examination, because lots of people
24 will have lots of questions, and I would like you to move
25 around and get some fluid.

1 I do ask just the spelling on this last line of the
2 next to the last paragraph, "too" large would be "TOO" and too
3 small, "TOO"?

4 DR. STEPHENSON: Yes, it would.

5 JUDGE CLIFTON: All right. We'll just make that change on
6 the record copy, page 14 of Exhibit 133, last line of the next
7 to the last paragraph.

8 DR. STEPHENSON: I normally catch those.

9 JUDGE CLIFTON: Well, you did a marvelous job on this. No
10 complaints.

11 Okay. Thank you. Let's see what time it is. Because
12 there's so much material here, I think you should have your
13 15-minute break, even though we're a bit early. Please be back
14 and ready to go at 10:50 -- 10:40, thank you.

15 (Whereupon, a break was taken.)

16 JUDGE CLIFTON: We're back on record at 10:41.

17 Mr. English?

18 CROSS-EXAMINATION

19 BY MR. ENGLISH:

20 Q. Thank you, your Honor.

21 Good morning, Dr. Stephenson.

22 JUDGE CLIFTON: And state your name.

23 MR. ENGLISH: I'm Chip English.

24 BY MR. ENGLISH:

25 Q. Your Honor, I may take this in pieces, which is to say,

1 after a period of time I may sit down and let others go. This
2 is the first time I have seen the testimony, too, so I'm still
3 working through it myself.

4 JUDGE CLIFTON: Yes, everyone will be welcome to have
5 numerous opportunities to question Dr. Stephenson. There is a
6 lot of very important information to cover.

7 BY MR. ENGLISH:

8 Q. But let me start, if I may, you, like a number of
9 witnesses, have been somewhat shy about listing all the things
10 you have done, and you did have a little bit of a conversation
11 with the Judge, but I would like to maybe go through that a
12 little in greater detail. When did you get your Ph.D.?

13 A. I may misstate this, I'm sorry, most people remember
14 these things like they would remember when they had their green
15 Chevy pick up, but it was 1987, I think, but I would have to
16 look back and see, Chip, honestly.

17 Q. Before 1990?

18 A. Yes.

19 Q. And after you got your Ph.D., where were you first a
20 professor?

21 A. I was first a professor at the University of Wisconsin
22 at River Falls. I was there for three years. I was then hired
23 at Cornell University, where I spent about 18 years, I think.
24 It was 18 years. And then about 6 years ago, I was hired back
25 at the University of Wisconsin at Madison.

1 Q. And during that time, approximately what percentage of
2 your work would you say would be connected to the dairy
3 industry?

4 A. One hundred percent. I have always worked entirely
5 with the dairy industry.

6 Q. And during that timeframe, other than what you have
7 already told us about, which was the work you did as an
8 Associate Director for Outreach when you helped develop the
9 U.S. Dairy Sector Simulator, have you had other occasion to
10 consult with USDA with respect to dairy policy?

11 A. Sure. I mean, I have worked with USDA any number of
12 times on other projects where we have done some additional work
13 and provided insight. This USDSS model has probably comprised
14 the bulk of that effort through the past. I'm not sure that
15 there's been another model that's been used more in USDA
16 testimony or work from outside the Department than this model
17 has.

18 Q. Now, we have talked about, or you have talked about how
19 the model's been used by USDA. Has it also been used or
20 discussed by folks at the other end of the street, the
21 U.S. Capitol, Congress?

22 A. It has, quite a number of times. I have often been
23 contacted by members of Congress, and the groups that I work
24 with have worked with members of Congress as they begin to
25 think about policies and changes that may be made. They, often

1 times, would like to know what the impact of those would be.
2 So it's not unheard of at all, particularly on a five to
3 seven-year cycle to have quite a bit of conversation with folks
4 in Washington.

5 Q. And I actually don't have the answer. Have you
6 testified before Congress or Congressional hearings?

7 A. I have at least two times, maybe three. I can't
8 remember if it was three or two, but, yes.

9 Q. Okay. And you also say you have testified at several
10 Federal Milk Marketing Order hearings over that time period?

11 A. Yes, that's correct.

12 Q. Can you discuss, just briefly, what the subjects were
13 that you can recall from those?

14 A. Sure. There was one shortly after my Ph.D. work where
15 I looked at the costs of seasonality in the dairy industry, was
16 one piece of testimony. And it used a precursor to this USDSS
17 model to talk about some of the costs of that particular
18 seasonality. I have looked at, and testified, to some of the
19 product price formulas and impacts of those, or changes in
20 price discovery, at least.

21 Q. Okay. Your Honor, I am not going to belabor the point
22 at this point. I do want to move that Dr. Stephenson be
23 accepted as an expert in Agricultural Economics with an
24 emphasis in Dairy Economics Regulation and Policy.

25 JUDGE CLIFTON: With an emphasis in dairy?

1 MR. ENGLISH: Economics, regulation, and policy.

2 JUDGE CLIFTON: Does -- Mr. Beshore?

3 MR. BESHORE: May I voir dire?

4 JUDGE CLIFTON: Yes. And, Mr. Beshore, just so that
5 everyone could hear that, would you repeat what you requested?

6 MR. BESHORE: I asked may I voir dire.

7 JUDGE CLIFTON: Yes.

8 MR. BESHORE: V-O-I-R, D-I-R-E.

9 JUDGE CLIFTON: Very good. And state your name.

10 MR. BESHORE: Marvin Beshore.

11 JUDGE CLIFTON: Thank you.

12 VOIR DIRE EXAMINATION

13 BY MR. BESHORE:

14 Q. Okay. No questions about Agricultural Economics or
15 Dairy Market Regulation. My question is with respect to
16 policy. Was any of your, you know, undergraduate or graduate
17 work focused on policy as opposed to, you know, the other
18 things that you have indicated you studied?

19 A. In the graduate program, do you mean?

20 Q. Undergraduate, graduate, either.

21 A. Sure. Yes. It's been common, as I mentioned, in the
22 past, at least cyclical, periodic for Washington or members of
23 Congress, their staff to contact us with ideas that they are
24 percolating for changes in dairy policy and to say, you know,
25 what would the implications of these be? Can you give us an

1 answer through some of your modeling techniques or professional
2 judgment?

3 Q. Okay. No, I understand that. What I was in artfully
4 looking for, or asking, attempting to elicit, was whether your
5 degree programs, theses, etcetera, were any of them policy
6 papers as opposed to economics papers?

7 A. No, they were addressing issues. And specifically, I
8 guess, during my Ph.D. program, I did look at the costs of
9 butter and powder plants and implemented those costs with a
10 spatial model to try to assess some of the expenses involved in
11 balancing dairy markets. And that was later introduced into
12 testimony in Federal Order hearing. So it wasn't work that was
13 specifically about policy, but it was work that's related to
14 solving problems for dairy industry.

15 Q. Okay. Generating economic analyses or reports that
16 could then be taken by policy makers and utilized?

17 A. Yes. Marv, I guess just as a general, just as a
18 general theme or direction that I'd like to pursue, is not work
19 for policy sake. I'm not trying to create policy, I'm not
20 trying to think about policy, I'm trying to do analyses that
21 help people understand what maybe some of the unintended
22 consequences or intended consequences may be for policies that
23 they might like to implement.

24 Q. Very good. Thank you very much.

25 JUDGE CLIFTON: Dr. Stephenson, I'm looking on the first

1 page of Exhibit 133. What is your current title?

2 DR. STEPHENSON: My current title is Director of Dairy
3 Policy Analysis.

4 JUDGE CLIFTON: And how long have you been the Director of
5 Dairy Policy Analysis at the University of Wisconsin?

6 DR. STEPHENSON: Six years. It was a position that was
7 created when I came there.

8 JUDGE CLIFTON: And when you were at your previous
9 university, what was your title as you left?

10 DR. STEPHENSON: The working title there was Director of,
11 Associate Director of -- I think I have it in here. It's not a
12 title that I used frequently, it's a title that was bestowed
13 upon me with the Cornell Program on Dairy Markets and Policy,
14 the Associate Director of Outreach with the Cornell Program on
15 Dairy Markets and Policy.

16 JUDGE CLIFTON: All right. Policy is inextricably entwined
17 with your work. I appreciate your statement that you don't do
18 it just for the sake of policy, but policy at its best does, in
19 fact, evaluate practically what problem-solving and
20 consequences are.

21 I do accept you, oh -- did anyone else want to question
22 Dr. Stephenson before determining whether you have any
23 objection? No one. Does anyone object to my accepting
24 Dr. Stephenson as an expert in Agricultural Economics with an
25 emphasis in Dairy Economics, Regulation, and Policy? No one.

1 Dr. Stephenson, I do accept you as an expert in Agricultural
2 Economics with an emphasis in Dairy Economics, Regulation, and
3 Policy. Mr. English.

4 CROSS-EXAMINATION

5 BY MR. ENGLISH:

6 Q. Thank you, your Honor.

7 And just as I did yesterday, although it's going to be
8 awhile before I get there, I will be, at some point, asking
9 Dr. Stephenson to look at Exhibit 30, which was never admitted
10 but it was the 2011 Chicago Workshop of Economists report on
11 the 2006 data, which he's referenced in his testimony. So I
12 just want people to know ahead of time. It will take me awhile
13 to get there, but so people can have Exhibit 30 handy at some
14 point.

15 So you said actually in the discussion we just had,
16 which is called voir dire, that some of your other work even
17 before the U.S. Dairy Sector Simulator came along was sort of
18 like a precursor to the model; is that correct?

19 A. Yes, that's correct.

20 Q. And is it fair to say that given the number of years
21 you have worked on the model and the model changes over time or
22 is updated?

23 A. Oh, absolutely. There are two ways in which the model
24 can be updated. One of them is just simply data. As we're
25 looking at different time periods, we know that the results

1 will change if the fundamental data underlying that has
2 changed. But we have also changed structure in the model to
3 maybe address questions that people have wanted to have
4 addressed. So as an example, we have added product categories
5 as some of those products became more important to a dairy
6 industry.

7 Q. So it's -- it's a dynamic model in a way, that it's not
8 static, you don't just leave it in place, you have done things
9 to it when you have been asked questions and made changes to
10 it?

11 A. Yes, that's correct.

12 Q. Okay. Now, you haven't actually presented in this
13 particular document, your data for September, or your results
14 for September 2014, have you?

15 A. No, I didn't in here just because I felt that it was
16 not as important. But once again, the footnote on page 2 that
17 provides access to both this testimony itself in PDF form, has
18 some of the additional supporting maps to look at, the
19 September, some of the product maps of the September time
20 period.

21 Q. And I think you said earlier, I'm not sure if it was
22 actually in your written statement or if it was added, that the
23 September results were not materially or significantly
24 different from the March 2014 results for cheese?

25 A. No, I don't think that they are. You can certainly

1 look at them, but the difference in price, for example, is not
2 materially different at all.

3 Q. Now, I think you did a fair amount of this, but going
4 to page 4 and looking at the figures, I just want to maybe have
5 you pick a location and describe it just a little more for
6 particular location. And since we're in California, if you can
7 look at, you know, Figure 1, and describe -- I guess I'm
8 assuming those, the two boxes, the larger two boxes, would be,
9 one would be Los Angeles and the other would be the Bay Area?

10 A. That's correct.

11 Q. Okay. So I'm not sure, there's a lot of detail out of
12 it, but could you describe sort of what you are seeing, say,
13 out of Los Angeles area for Figure 1?

14 A. Sure. Out of Los Angeles, you can see in this
15 particular graphic the large triangle which represents the
16 volume of processing capacity, overlaid against the large
17 rectangle there, square, which indicates the large demand in
18 this population area as well. There is a fairly heavy green
19 line from somewhat north of Los Angeles, indicating a milk
20 assembly flow to those plants and product being processed and
21 distributed, both locally, and also a little bit to the north
22 and west of the Los Angeles area.

23 Q. Okay. And then turning to Figure 2, looking at
24 California, there's three triangles, but the largest one would
25 be near us, where we are today?

1 A. That's correct. Uh-huh.

2 Q. Okay. And so what does that triangle represent and
3 then what do the lines show coming out of that triangle?

4 A. That triangle would represent a fairly large cheese
5 processing location. Once again, not necessarily emblematic of
6 a single plant processing there, but in that location, that
7 multi-county area, a great deal of cheese being processed.

8 The orange lines are the product flows of the cheese
9 product from that area. A heavy line going down toward
10 Los Angeles, but many lines going down toward the Southeast and
11 Florida and through the Gulf states.

12 Q. Turning to page 5 --

13 JUDGE CLIFTON: Before you leave that, Mr. English, as I
14 look at those lines, Dr. Stephenson, and I see the little green
15 line with an arrow, that is somewhere within New Mexico, well,
16 the border of New Mexico and Texas, what is that?

17 DR. STEPHENSON: That, again, is milk that is moving from a
18 supply location to the plant in New Mexico for being processed.
19 Most of these have relatively few green lines because there's
20 adequate milk supply near the plant. And if we showed
21 absolutely every flow on a map like this, it gets to be
22 unreadable. So we try to express them in ways that provide
23 some greater understanding of what the model's trying to do.

24 JUDGE CLIFTON: Thank you.

25 MR. ENGLISH: Actually, I am going to jump ahead, thank

1 you, your Honor, for doing that.

2 BY MR. ENGLISH:

3 Q. I want you to -- I want you to keep that figure in
4 mind, and then I want you to also look at Figure 4 on page 7.
5 And I think what you said is the model doesn't reflect, I'm
6 looking at the blank space between the green, which basically
7 covers most of the Gulf states, Florida, Louisiana, what I
8 would call 90 percent of Texas, except for maybe the Panhandle,
9 30 or 40 percent of New Mexico, and a good portion of Arizona.
10 And I think what you said is the model wouldn't make those
11 places, for efficient movements. Is that, or of this
12 production of cheese? Or what were you saying about that?

13 A. That's correct. The model is fairly dispassionate
14 about whether it would choose to operate a cheese plant in a
15 known location. It could, but it can't -- it can't create a
16 plant where one doesn't exist. But it can shut plants down
17 that, you know, it doesn't think are in the right location or
18 just simply not use them, let's put it that way.

19 And that area down there in that very southern band,
20 the reason it's not showing up in color there is that there's
21 not a large enough volume of cheese being processed in that
22 location to provide data at those points. So, for example, I
23 think that cheese plant in New Mexico is large enough to
24 provide, you know, data down to that point, but not beyond it.

25 Q. So which cheese plant are you referring to, the small

1 one in the bottom, the bottom of --

2 A. The larger one on the border of Texas.

3 Q. Oh, on the border of Texas?

4 A. Uh-huh.

5 Q. So what is your conclusion about that for the model
6 that --

7 A. Well, I don't want you to read too much into that.
8 It's just to say that we wouldn't project or try to project
9 values across an area where we don't have data at least at the
10 boundaries.

11 Q. Okay.

12 A. So the plants that are actually providing product and
13 doing processing in the model are giving us enough data to fill
14 in the gaps between them.

15 Q. All right.

16 A. And it's an interpolation that's called krieging
17 methods.

18 Q. I'm sorry, what?

19 A. Krieging, K-R-I-E-G-I-N-G, it is a mapping methodology
20 that just interpolates multiple points, values at the points.
21 We have real actual values. That is actually shown in this
22 Figure 3 on page 6, where we have specific points being shown
23 and values at those points that are too fuzzy and small to
24 actually read here, but it's those values that are letting the
25 mapping program project over that surface of the rest of the

1 country. And we are just simply showing the mapped values in
2 Figure 7, as opposed to the points.

3 Q. I think the most critical thing I heard, what you are
4 telling me was, but don't over read that space as in some way.
5 Is that, that's what I heard you say?

6 A. Well, we absolutely have small amounts of cheese being
7 processed in some of these areas, but the USDSS model would
8 have said we probably shouldn't have it, it is not the most
9 efficient location for the simplification of the data that the
10 model actually has to process in those areas.

11 Q. Okay. So now I want to go back to page 5.

12 JUDGE CLIFTON: Would you spell again that term, krieging?

13 DR. STEPHENSON: Krieging, K-R-I-E-G-I-N-G.

14 JUDGE CLIFTON: Thank you. So page 4, Mr. English?

15 MR. ENGLISH: Page 5, your Honor.

16 JUDGE CLIFTON: Page 5.

17 BY MR. ENGLISH:

18 Q. And you made a comment, and I understood what you mean,
19 but whether or not the record would reflect it at some point in
20 the future, I'm referring to the discussion you had about
21 correlations being observed, values greater than 0.88 for all
22 products, and as high as 0.99 for many products, and you said
23 that was a very high correlation. And why does that matter?

24 A. Well, for example, a correlation of one would say that
25 we would perfectly predict what the, from the model, what the

1 real world outcomes would be for the volumes of cheese
2 processed in different locations.

3 We do try to make sure that when we have model results
4 like this, that the model is as correct as can be from a
5 theoretical standpoint and from a construction standpoint. If
6 it's not coming close to replicating observations that we see
7 in the market, then we would probably either think that the
8 model was not well specified, was not well built, or that it
9 was trying to tell us something really strong. And in this
10 particular case, what it's saying is that it is doing a pretty
11 good job with the areas where we can actually look at it and
12 compare it to real world results. So the economy of the U.S.
13 dairy market is producing cheese and other dairy products in
14 the location that this model would predict it should. Not
15 perfectly, but very well.

16 Q. Turning to your discussion on page 10, and I just want
17 to ask you, since your survey's yet not been completed, does
18 the lack of being complete undermine the results in any way or
19 what would you conclude from this, notwithstanding the fact
20 that the surveys are not complete?

21 A. Yeah, if I thought that we didn't have enough
22 information in the survey to at least offer some insights for
23 AMS to consider in the hearing process, I wouldn't have
24 provided it here. And there were, in fact, a few of these
25 plants. We had 88 that have entered data already, I believe it

1 was 62 plants, yes, 62 that were complete surveys, and I felt
2 that they were complete enough to report some of the data from
3 that. We are following up with plants that haven't got
4 completed surveys yet. We make phone calls to ask them
5 questions that we have in their responses, but 62 of the plants
6 were complete enough to include here.

7 Q. Now, this data is not audited?

8 A. It isn't audited. I don't have authority to audit, but
9 we do try to make comparisons with known data where we can to
10 go back into that.

11 I do stress that this is early days on this study.
12 This was information that has been in the process of being
13 collected for about a month, and we simply haven't had the
14 opportunity yet to go back in and check with plants and known
15 pieces of information where we can do kind of cross-checks on
16 that to verify both completeness and sensibility of data and
17 plants, but we don't audit.

18 Q. And nonetheless, and notwithstanding the fact it is not
19 complete, you didn't see the data, you yourself just said you
20 wouldn't have shown and testified if you weren't comfortable
21 what were you seeing --

22 A. Absolutely correct. And there are pieces of this
23 information that I think are, I haven't digested well enough to
24 feel like I'm ready to say here is more information. This was
25 information that I thought was complete enough, and not

1 terribly controversial, from my point of view, to provide here.

2 Q. So then turning to page 11 -- apparently, your Honor,
3 we did not sufficiently recognize the Kansas City Royals
4 earlier this week -- so we take whatever levity we can at this
5 point, Dr. Stephenson.

6 A. Understood.

7 Q. Turning to page 11, and your discussion of a
8 transportation model. So Version 2.0 was March 1994, it's been
9 updated to Version 4. That's tells me that it's been around
10 now for well over 20 years?

11 A. Yes. And even longer than that, but, yes, it was a
12 model that's been heavily used by cooperatives who contract
13 with milk haulers and milk haulers themselves to understand
14 their own costs.

15 Q. So it is something that's relied on generally by the
16 industry?

17 A. Well, yes. And the industry has other opportunities
18 now, I think, for assessing some of their costs. But at the
19 time that this was initially developed, many of the smaller
20 operators in particular, but cooperatives as well, did want to
21 work with their milk hauling companies to make sure that they
22 understood what their costs were and that their costs were
23 going to be covered. That was the genesis of developing this
24 model. But it's been very useful to have since that time
25 period as well, because it -- it provides some data and input

1 into other research products that we do like this.

2 Q. Okay. On page 13, and I was trying to pay very close
3 attention to all of it, and especially when Judge Clifton was
4 asking you questions. But I'm not yet sure that I understand
5 Figure 9. So first, again, partly for clarity of the record,
6 what is a histogram?

7 A. A histogram describes the distribution of the
8 observations that you have. And so the distribution here would
9 be the costs per pound of cheese, and the, or, excuse me, the
10 cost per pound of other solids, and that includes both what was
11 charged as a minimum price by the Federal Milk Marketing Orders
12 to cheese plants that were regulated, and it includes the
13 assessment of 12.79 cents for processing and transportation of
14 the whey solids to an additional plant for further processing,
15 or final processing.

16 Q. So, I understand the X axis. For the Y axis, what
17 precisely is the frequency? Is it the number of times per
18 month?

19 A. No, this would be the number of months that a cost, if
20 you take, for example, that .25, that's 25 cents per pound of
21 solids. Okay? Other solids. And it would show that about 30
22 months had that level of cost in it over this time period of
23 January 2000 through September of 2015.

24 Q. Okay.

25 A. We could have displayed this dispersion more like I did

1 in those box-and-whiskers box, and I'm sorry I didn't just now.
2 This also gives information about, you know, the range that we
3 see on these costs, and how frequently those costs occur.

4 Q. All right. So I want to go back now briefly to page 7,
5 and your statement at the top, which is the USDSS model has
6 been updated to represent two months of the year in each of
7 2001, 2006, 2011, and now for 2014.

8 A. That's correct.

9 Q. Now, there was a dairy Economist meeting in Chicago in
10 2011, which I believe reported the 2006 results, correct?

11 A. That's correct. My colleague, Chuck Nicholson, I
12 think, reported on those model results then.

13 Q. Okay. Do you have a copy of Exhibit 30 with you?

14 A. I do.

15 Q. So now you said that your colleague Chuck Nicholson
16 reported them. But, so this is a, basically this is a copy of
17 a power point presentation, so it's 29 pages but two slides per
18 page, so it is basically 58 slides, correct?

19 A. That's correct.

20 Q. And you said that, that your colleague Chuck Nicholson
21 reported the results, but your name is also listed on the power
22 point, correct?

23 A. That's correct. And I have used the term "we" in my
24 testimony here, because Dr. Nicholson has also worked with me
25 to assemble this 2014 data as well.

1 Q. Okay. And so you did work on the 2006 --

2 A. That's correct.

3 Q. -- data, which was reported by 2011. Have you seen
4 this power point presentation before?

5 A. Yes.

6 Q. Okay.

7 A. It's been awhile, but, yes.

8 Q. I don't know whether you need to leaf through it, but
9 first I want you to authenticate it. Can you just say yes,
10 this is --

11 A. Yes, this is certainly. I recall Dr. Nicholson putting
12 this together and presenting this, this talk at our meeting.

13 Q. And again, the "we" part means you would have also
14 helped him with the underlying data and maybe something else?

15 A. Yes, absolutely, yes.

16 Q. Okay. So I would like to turn, first, to page 8, and I
17 think we have talked somewhat about this, but this has two
18 slides regarding some revisions or changes. Could you just
19 tell me a little bit more about what these two slides tell us
20 with respect to the original model and the previous model?

21 A. Sure. We added a number of product categories to the
22 model at this point in time, to reflect a lot of the
23 intermediate products in particular. We were seeing whey
24 protein concentrates, dry wheys, ultra-filtered milk, and milk
25 protein concentrates, being produced in greater quantities and

1 becoming more important as what we would call intermediate
2 products, or products that would be used in other dairy
3 products. And so we explicitly expanded the model to include
4 those. That's what this particular slide is showing.

5 We had also, at that point in time, made a few other
6 changes to the model as well in reporting some final product
7 categories. More recently, with the 2011 data, no, excuse me,
8 with the 2006 data, the model was later updated to include
9 Greek yogurt as a separate category from regular yogurt because
10 we had some questions on a research project to take a look at
11 Greek yogurts, so there have been model updates over time.

12 We have added a few data points in time to represent
13 new processing plant locations, which means, of course, that we
14 need to update the road network and, of course, as I indicated,
15 the data always need to be updated when we we run the model.

16 Q. In the changes slide on the bottom, you also list
17 non-linear yield functions based on use of cream and skim
18 fractions and intermediate products. And then you say, results
19 in endogenous composition. Could you explain a little bit more
20 about that?

21 A. Sure. We -- we finessed a bit about what the model was
22 doing in the middle of its solutions here, so at one point in
23 time, we had dairy products that had to have very specific
24 composition of ingredients. And what we also realized, was
25 that, in fact, most of our products that have standards of

1 identity, have some small range on composition that's
2 allowable. And we have done that in the model too, to indicate
3 where it's not particularly binding constraint. You can use
4 more of the component to make a pound of cheese, for example.
5 If it's a particularly costlier binding constraint, then you
6 can use just a little bit less. But they are small windows
7 that are in there.

8 We also wanted to make sure in the model that we are
9 tracking every bit of component across the United States. So
10 as an example, when a plant brings in milk, it has regionally
11 different composition, and the components are accounted for in
12 a plant are used for whatever they are used for there, and the
13 products that get shipped from there maybe as a final product
14 or an intermediate product, that we are not losing or creating
15 components anywhere in the model. They are accounting
16 equations that were added here to assure ourselves that we had
17 this mass balance that was being fully represented and fully
18 responded to in the model, internally endogenously.

19 Q. And I apologize, I should have asked you to look at
20 page 9, because I think that may also go to that point. The
21 two slides there, I think, list both the final products and I
22 think the intermediate products that you just discussed.

23 A. That's correct. Uh-huh.

24 Q. Okay. Now, turning to page 10 at the bottom, and then,
25 over the next couple of pages, you have got fuel costs

1 scenarios and you have got changes in Class I price surface
2 with changes in fuel costs.

3 Do you see that?

4 A. I do.

5 Q. So what were you showing, or trying to show with that
6 slide and the slides that follow on pages 11 and 12?

7 A. Well, this was a case where we were providing some
8 emphasis on the dual part of the solution to the models, and
9 were trying to assess the impacts to the dairy industry of
10 changing fuel costs. This was at a time when diesel fuel costs
11 has increased rather substantially. They have retreated
12 somewhat since then, but we wanted to get an idea about what
13 the impact on milk values were of prices. So we ran the model
14 looking at the impacts of these fuel prices at different
15 levels.

16 If I remember correctly, the \$2.36 was the average fuel
17 cost at the time, and then we increased this to \$3.50 a gallon
18 to reflect the current time period in which the model was run,
19 not the time period for which the data were represented. And
20 also a \$5 per gallon diesel fuel price.

21 Q. This is for Class I analysis?

22 A. These reports, I believe, were all Class I, but I would
23 have to look to see. Yeah. They are Class I results.

24 Q. Okay. So looking at the May 2006, \$2.36, that's the
25 lowest fuel level. And so when I look in California, Central

1 California, I see \$1.20, correct?

2 A. Yes.

3 Q. Okay. And if you used, using the smallest fuel level,
4 I'm figuring that that means that by the time you get to
5 Florida you have sort of the smallest difference of these three
6 maps, because if you use the \$5.00 fuel, you would end up with
7 a much bigger difference by the time you get to Florida; is
8 that correct?

9 A. That's correct.

10 Q. Okay. So if we look at \$2.36 on 11, it looks to me
11 like \$2 line runs right up almost through Chicago?

12 A. Yes.

13 Q. Okay. So that would be an 80 cent difference for
14 Class I price surface from Central California to, up to
15 Chicago?

16 A. Yes.

17 Q. Okay. And I'm not sure whether you brought it up with
18 you, but I did, during the break, look at your website, Dairy
19 Markets, which, as I think you told us, includes more maps that
20 you didn't put in. And I'm not asking to put it in, although
21 we could if we needed to, but when I looked at that, it looks
22 to me like the central, the price in Central California is
23 \$1.60, you don't have this with you, I just want to you -- do
24 you remember what it would be?

25 A. I don't recall. I wouldn't want to talk about that

1 unless I was looking at it, I guess.

2 Q. Can I show it to you?

3 JUDGE CLIFTON: Yes, you may approach the witness. Do you
4 have it on your laptop, Mr. English?

5 MR. ENGLISH: I do.

6 BY MR. BESHORE:

7 Q. So first, could you confirm that that is from your
8 website, I'm not showing you some bizarre document I created
9 for myself?

10 A. Good luck with that. No, this is -- this is certainly
11 from our website.

12 Q. And for March of 2014, does that show \$1.60 in Central
13 California as the lowest value for the Class I price surface?

14 A. I'm not sure that it is the lowest value, but it is
15 just about the lowest value. I see a little corner clear up in
16 North Dakota that looks like \$1.40 or something like that, but
17 yes.

18 Q. Okay. But \$1.60 in Central California, correct?

19 A. Yes.

20 Q. And then as I looked at it, it looks like the lines for
21 Chicago may have shifted just enough so it maybe actually
22 between two lines, but would it look like it's certainly at
23 least 80 cents and maybe 90 cents now between Chicago and
24 Central California, so somewhere in the \$2.40 to \$2.50 range?

25 A. Yes, it looks like it is about that, yes.

1 JUDGE CLIFTON: And Dr. Stephenson, what website are you
2 referring to as "our" website?

3 DR. STEPHENSON: I used the "our" website to refer to the
4 dairy markets and policy website, which is dairymarkets.org

5 MR. ENGLISH: Which is footnote one, your Honor.

6 JUDGE CLIFTON: Thank you.

7 MR. ENGLISH: And if you go to,
8 dairymarkets.org/CA/CLI0314.bnp,
9 which I think would be March 14, if the 0314 is right.

10 DR. STEPHENSON: That's correct, Class I.

11 MR. ENGLISH: And it's a BD map, so it's -- but you can get
12 there directly from footnote 1.

13 Give me one minute, your Honor.

14 JUDGE CLIFTON: Certainly.

15 BY MR. ENGLISH:

16 Q. Dr. Stephenson, thank you very much. Again, I might be
17 back but I may also have been completed, and very much
18 appreciate your coming here today.

19 A. Sure.

20 JUDGE CLIFTON: Who will ask the next questions of
21 Dr. Stephenson? Mr. Beshore.

22 MR. ENGLISH: I'm sorry. I apologize.

23 JUDGE CLIFTON: Mr. English?

24 MR. ENGLISH: Since he doesn't have a lawyer, someone needs
25 to move in the exhibit. I would move Exhibit 133, his

1 testimony, and also at this time, his having authenticated it
2 and discussed it, I would move admission of Exhibit 30.

3 JUDGE CLIFTON: Let us start with Exhibit 133. Does anyone
4 wish to question Dr. Stephenson before determining whether you
5 object? No one. Is there any objection to the admission into
6 evidence of Exhibit 133? There are none. Exhibit 133 is
7 admitted into evidence.

8 (Thereafter, Exhibit 133, was
9 received into evidence.)

10 JUDGE CLIFTON: With regard to Exhibit 30, does anyone wish
11 to question Dr. Stephenson before determining whether you have
12 objections? No one. Are there any objections to the admission
13 into evidence of Exhibit 33 -- I'm sorry, 30, thank you --
14 there are none. Exhibit 30 is admitted into evidence.

15 (Thereafter, Exhibit 30, was
16 received into evidence.)

17 JUDGE CLIFTON: Mr. Beshore?

18 CROSS-EXAMINATION

19 BY MR. BESHORE:

20 Q. Thank you, Marvin Beshore.

21 Good morning, again, Mark.

22 A. Good morning, Marv.

23 Q. I want to start with a couple of questions about the
24 why survey. Do you have information with respect to the
25 geography of the plants that responded to the survey?

1 A. I do. Of the -- there were, I believe it was 16
2 different states that have participated in this of the 62
3 plants that I'm reporting here, so it covered a fair geography.
4 I can describe the geography. I will not reveal, as I don't
5 with any of these surveys that are considered proprietary
6 information, specifically who has participated and who hasn't.
7 But we have had plants from the Northeast all the way to the
8 west, and states in between.

9 Q. Can you reveal, or do you have and can you reveal any
10 concentration of the states? I mean, how many were in
11 Wisconsin, how many were in California, or any other
12 information of that nature?

13 A. There were about a third of the plants that were in the
14 Upper Midwest, most of them in Wisconsin; there were about a
15 third of the plants in the West, most of them in California,
16 and the other third was disbursed across the Mideast and the
17 Northeast.

18 Q. Okay. So when you describe the West in that, when you
19 used the West in that terminology, what are you including?
20 What states?

21 A. From Colorado roughly West.

22 Q. Including Idaho?

23 A. Yes.

24 Q. And New Mexico?

25 A. Yes.

1 Q. With respect to, I'm on page 10, with respect to the
2 regulation status of the plants, I'm not sure there's much
3 significance to this, but it's come up a number of times in the
4 hearing. Do you have any information with respect to whether
5 the pool plants have a nonpool side and/or vice versa? You
6 know, split plants, that kind of thing?

7 A. I know what you are talking about, Marvin, but I didn't
8 ask that question.

9 Q. Okay.

10 A. So this was simply the response of a plant to a
11 question that is, you know, laid out here, exactly what is your
12 regulation? These categories that were given were the ones
13 that word for word are on the survey and a plant would choose
14 between those.

15 Q. Okay. And was there any, did you seek any information
16 with respect to whether the category of unregulated plants
17 purchased milk that was, that was pooled under Federal Orders?

18 A. Well, I did ask the question, or shown there the
19 response category shown in the second line there, of whether
20 the milk that was purchased was already pooled or was pooled by
21 a cooperative, but that would have been the only option that
22 was available.

23 Q. Okay. Now, do you have any information with respect to
24 the portion of the milk? Maybe I missed it somewhere here.
25 But if you took a category of the plants that, for instance,

1 more than 3 million pounds of milk per day, 12 plants, do you
2 know, and maybe, I apologize if you said it in here and I have
3 lost it, how many of those process the whey onsite?

4 A. Into final products?

5 Q. Process it into -- in any manner.

6 A. Well, all of them would have processed it in some
7 manner or another, and I include the processing to be
8 concentration to be shipped to another plant for drying.

9 Q. And of those -- of those plants, how many processed it
10 into a final product, do you know that?

11 A. You know, I don't remember precisely, but it was the
12 majority of those plants, but not all of them, that I know.

13 Q. Okay. And the same question, the same information with
14 respect to the plants, the 23 plants that were between
15 1 million and 3 million pounds of milk per day, how many of
16 those plants processed the whey onsite?

17 A. To some degree all of them would have done that.

18 Q. Okay.

19 A. Into final products, a small proportion.

20 Q. Do you know what portion of the volume of milk
21 represented in the survey was processed onsite by plants into
22 final products, whey products?

23 A. No, I didn't do that calculation. And again, I
24 provided categories or wanted to know, not -- excuse me --
25 didn't provide categories. I reported these in categories for

1 plants. I let them choose what they entered in terms of the
2 amount of milk that they were bringing in, but I haven't done
3 that calculation yet. It would be a large proportion of whey
4 that was processed into final product at the plant.

5 Q. Okay. So without pulling the document out and going
6 through the calculations, there's an exhibit, it's 96 in the
7 record, that comes from CDFA, was prepared by CDFA, and it has
8 a range of, an array of cheese plants in the state by volume
9 processed, much as you do here, and an indication of whether
10 they process whey or not. And when we have gone through it,
11 you can -- you can essentially, it doesn't identify any plants
12 or any such thing, but you can essentially determine that
13 roughly 85 percent, I'm not being precise, but in that area of
14 the volume of whey produced at plants is processed by the
15 plants onsite. And does that meet with your general knowledge
16 of the industry?

17 A. I wouldn't be surprised at a number like that. I,
18 again, would have to look at this. You know, again, when I
19 have the opportunity to go back in and further look at this, I
20 would like to know how representative the plants sample is that
21 we have here. Is it over sampled by smaller or larger plants?
22 But unquestionably, large plants, a single large plant can
23 provide a great deal of weighted average value.

24 Q. Right. And in the industry today, those large plants
25 are processing their whey onsite.

1 A. Most of them are, not all.

2 Q. Most of them are. Okay. Okay. So if in the area, I'm
3 not being, pretending to be precise, but in the range of, you
4 know, between 85 percent of the whey is being processed to
5 finish products onsite, if we are talking about building
6 transportation and other related costs into a whey value, we're
7 really talking about the 15 percent or so that's not in that
8 category, correct?

9 A. It is a reasonable thing to suggest, yes.

10 Q. Well, I mean it's pretty much just arithmetic, right?

11 A. It is, yes.

12 Q. So --

13 JUDGE CLIFTON: Mr. Beshore, the way you asked your
14 question it sounded to me like of the hundred percent that have
15 a whey stream, 85 percent of those process onsite and the other
16 15 percent ship it. But what it -- but what that doesn't
17 reflect is how many of the whey streams are totally
18 unprocessed. So if you don't mind, could you go back and ask
19 your question again?

20 MR. BESHORE: Okay. And I was attempting to talk about
21 volumes as opposed to numbers of plants, your Honor.

22 JUDGE CLIFTON: But volumes of the whey streams that are
23 actually processed in some way as opposed to total values of
24 whey streams.

25 MR. BESHORE: No. I was talking about the total volume of

1 whey generated by the universe of a cheese making industry.

2 JUDGE CLIFTON: So volumes of whey generated.

3 MR. BESHORE: Correct.

4 JUDGE CLIFTON: So you are talking about things that have
5 had a great deal of water removed, no?

6 MR. BESHORE: I'm talking about the raw whey stream from
7 the process of converting raw farm milk into cheese.

8 JUDGE CLIFTON: Okay. All right. Given that that's what
9 you are talking about, Dr. Stephenson, help him understand the
10 percentages that he wants to know.

11 DR. STEPHENSON: My understanding of Mr. Beshore's question
12 was of total volume of whey, not total number of plants. So I
13 answered it.

14 JUDGE CLIFTON: When you say whey, what do you mean by
15 whey?

16 DR. STEPHENSON: I mean, if we think about all of the
17 cheese that's manufactured, regardless of plant numbers or
18 plant sizes, total volume of cheese, there's a total volume of
19 whey that is a co-product of that processing. And I was
20 responding to Mr. Beshore's question of the 85 percent as being
21 the total volume of whey that is created in the cheese
22 manufacturing process of the country.

23 JUDGE CLIFTON: Is that what you wanted, Mr. Beshore,
24 rather than the volume of whey stream?

25 MR. BESHORE: I think whey stream is another -- another

1 manner, not whey -- another manner of describing the gross
2 volume of whey that is the result of cheese making.

3 JUDGE CLIFTON: Okay. Let me see if I understand this.
4 I'm going to hand him Exhibit 96. And what I would like to you
5 understand and explain to me, Dr. Stephenson, from Exhibit 96,
6 is how many of the plants that end up with left overs from
7 making cheese, process that liquid byproduct, which I'm going
8 to call a whey stream, into some kind of whey product?

9 DR. STEPHENSON: From this particular chart, if I was
10 following the logic I think of what Mr. Beshore was asking the
11 question for, I would say that that Group 4 down through Group
12 1 would probably be that volume of product which would not be
13 represented as final whey, at least roughly by these numbers on
14 here. So in other words, the 85 percent of volume of the --
15 boy, what is that -- 1.5.

16 MR. BESHORE: Basically, the 85 percent represents taking
17 just prorating in the categories where there's 4 out of 5, 3
18 out of 6, I don't have it in front of me, but if you prorate
19 the volume within those categories and aggregate it, just add
20 it up, you get in the mid-80's range of volume that is
21 indicated to have, as having been processed by those plants.
22 Does that look -- just eyeballing it.

23 DR. STEPHENSON: Roughly, yes.

24 BY MR. BESHORE:

25 Q. Okay. I'm not trying to be, as I indicated, precise to

1 the, you know, to the decimal percent, but roughly.

2 A. Yes.

3 Q. Okay. And not talking about plant numbers, we're just
4 talking about gross volume of --

5 A. I realize you don't want to talk about plant numbers,
6 yes.

7 Q. Well, no, there's been a lot of talk about plant
8 numbers, but I want to talk about volume.

9 A. I realize that.

10 Q. Okay. Good. That's -- maybe just, you know, one
11 other, one other question or so on the whey, on the whey issue.

12 So when you have got information such as on Figure 9,
13 the histogram, which I probably still don't understand, but I
14 don't really, I don't really need to.

15 A. I'll take note of that. I won't use that in testimony
16 again.

17 Q. What you are representing there involved values that
18 included transportation costs?

19 A. It did, and partial processing.

20 Q. And partial processing. Very good. Thank you. Okay.
21 So now I want to go to other parts of your testimony, you know,
22 the USDSS model. And you have gone, you have -- your testimony
23 and, of course, all the supporting documents, documentation
24 relating to the USS system in its evolution over the years and
25 its iteration, focuses in details what goes into the model, and

1 there are many inputs.

2 A. That's correct.

3 Q. Okay. What I'm interested in at the moment is what
4 does not go into the model, and I'm wondering if you have, if
5 that's ever been, if you have ever just note -- prepared, and
6 noted, and called to our attention, summarized, the things that
7 don't go into the model but that are part of the real world of
8 producing, processing, buying, selling, milk dairy products.

9 A. Yes, there are a number of things. I mean, first of
10 all, I would just say that we would always view modeling as
11 being a simplification of reality, so there's a very good
12 reason why we don't include everything in here or don't try to.
13 There are also a few things that we didn't include at one point
14 in time that we do today because we think detail can be
15 important.

16 Q. Sure.

17 A. And that includes such things as the addition of those
18 intermediate and final products where we added categories, it
19 includes the mass balancing being done all throughout the model
20 that wasn't done originally as well.

21 We have wanted to consider moving the model from the
22 semi-static state, well, it is actually a static model.

23 Q. I'm sorry to interrupt you, but that's the point I
24 wanted to get to. It was described as a dynamic model, and
25 that, in terms of the use of that term in econometric modeling,

1 that's not correct, is it?

2 A. This is not an econometric model. It is an economic
3 model, but not an econometric model.

4 Q. Okay. An economic model, it is not a dynamic model.

5 A. It is not. It takes a snapshot at one point in time
6 and it is says, given the economic forces that people were
7 operating under at that point in time, how much milk did they
8 choose to produce at the farm level, how much dairy product did
9 consumers choose to consume, we take those as given, and then
10 we look at all of this information in the middle and provide
11 incites from the model's solution of that. So it is static as
12 a point in time.

13 I think the reference that I understood in terms of
14 dynamic was that the structure of the model, the data of the
15 model have changed over the years that we have been working on
16 it.

17 Q. Right. Okay. So it's been updated over time?

18 A. Several times, yes.

19 Q. As you have described. Okay. Now, so I want to get to
20 what's not in the model. Okay? So in terms of decision making
21 of all participants along the chain from farm to consumer,
22 would it be correct that what the model assumes is that all
23 decision making is done solely with respect to low cost of
24 purchase or of input or purchase?

25 A. I would go further than that and say that we don't have

1 purchase costs in the model, we have costs of transportation,
2 costs of transformation of milk into products, for example,
3 those kinds of things. And we say, minimize these costs for
4 us. So in economic theory, in a perfectly competitive world,
5 minimizing costs takes us to the same solution as we have with
6 profit maximization.

7 Q. Okay.

8 A. If prices would have been included in here and it was a
9 perfectly competitive world, we would get the same solution by
10 maximizing profits.

11 Q. Okay. And so, in essence, the only determinant of the
12 movements of product is the cost.

13 A. That's correct.

14 Q. So let's look --

15 A. Well, okay. Let me back up. It is correct in so far
16 as that is the primary thing that's driving it, subject to all
17 the constraints that we have in the model that you can't create
18 cheese out of nothing, you know, for example, or you have to
19 satisfy the demands for these products at all these different
20 locations. But costs are the things that are driving the
21 precise model solution, that's why there's only one solution to
22 any model run like this, not a thousand, not a million.

23 Q. Okay. So in terms of the plants then, one, I think I
24 have heard before and today, that capacity is not a constraint
25 in the model, plant capacity.

1 A. It can be, we have built that in there, but we don't
2 have enough information on real capacities of all plants to be
3 able to utilize that in a way that we feel comfortable with, so
4 we do try to go back after we have done a solution on a model
5 like this, to the things this we can observe and say how well
6 does this replicate what we think happens in the real world?
7 We have had many opportunities to have people tell us that, oh,
8 you know, that this is actually indicating what premiums are
9 pretty much in different regions of the country, this is the
10 kind of movements that we see for milk and dairy products. And
11 again, not just relying on people's testimony to us about how
12 well it replicates their experience, we can look at U.S. values
13 for some things like the volume of five product categories to
14 say, is the model reproducing what we observe to happen in the
15 world, or in our U.S. dairy world, in terms of the volume of
16 product processed.

17 Q. So the answer is, there are, while you have constraints
18 some data on constraints, constraint is not a -- plant capacity
19 is not a constraint in any of the -- that is used in generating
20 any of the -- any of the model results that you have reviewed
21 here today?

22 A. That's correct. The model could make a plant bigger
23 than it actually is, or it can choose to not process at a
24 location where it actually does get processed.

25 Q. Okay. And so just another non-factor in the data that

1 goes to the model is the ownership structure of the plants,
2 correct?

3 A. That's correct. We don't -- well, I'm not sure how you
4 would suggest we should break ownership out, but we could look
5 at proprietary versus cooperative ownership, and we don't do
6 that.

7 Q. Okay. So that's -- that's really the categories I was
8 thinking about.

9 A. Okay.

10 Q. Okay. And that's not been done and doesn't, is not
11 reflected in any of the results?

12 A. That's correct.

13 Q. Okay. And so another, you know, limitation of what is
14 involved in the model is the products that are, that are
15 assumed to be produced in the model. I mean, and I'm looking
16 at the revised model final products on page 9 I think of the
17 power point Exhibit 30, if you can, if you have that.

18 A. It was given to me, yes.

19 Q. Yes. Right. If you have it available to you?

20 A. I do.

21 Q. Okay. So when we look at this, and I'm interested in
22 cheese, okay? What I see is, and what I, and tell me if this
23 is right, what I understand is that the cheese soon to be
24 produced and therefore modeled, is in two categories, cheddar
25 cheese and other cheese, correct?

1 A. Yes. And actually, cheddar, rather than using the
2 title cheddar, it would have been better to use American cheese
3 here. But other would include everything but the
4 American-style cheeses.

5 Q. Okay. So I was wondering about the cheddar versus
6 American because one of the figures on, you know, in your
7 prepared testimony, talks about American cheese, Figure 2.

8 A. Yes.

9 Q. Okay. So I think you're telling me that the model,
10 final products, revised model final products on page 9 of
11 Exhibit 30, which says cheddar is not precisely correct, it
12 should say American.

13 A. Cheddar is a bit restrictive. We are really including
14 American-style cheeses there.

15 Q. Okay. And so what do you include then, in
16 American-style cheeses?

17 A. Most all of the products that are reported as
18 American-style cheeses by USDA. In fact, all of the products
19 that are included in there that are reported by USDA. So this
20 certainly would not include Italian-style cheeses where you
21 might ask what are those products? Mozzarella would certainly
22 be a large one, but all of the provolone, parmesan products
23 that are fairly different from one another, and yet are called
24 Italian, too.

25 Q. So when you use the American cheese category then for

1 consumption, does ERS report consumption of American cheese?

2 A. I believe that they do, but I would have to go back and
3 take a look to see whether they do or not.

4 Q. Okay. And if they don't, you would have, you would
5 have, they mixed consumption through some use of whatever they
6 do report?

7 A. ERS reports a few things on a regular basis and they
8 report a number of consumption studies that they have done only
9 very periodically, occasionally. And they have had a fairly
10 extensive report several years ago that included a lot more
11 varieties than they are reporting regularly in their dairy data
12 spreadsheets.

13 Q. Okay. So American cheese represents what, 20, 25
14 percent of cheese production now?

15 A. I believe it's about that, yes.

16 Q. In that area somewhere?

17 A. Yeah.

18 Q. So is there -- Mozzarella is not included here. That's
19 a separate category?

20 A. Not as a separate category, that's correct.

21 Q. Or Italians, you didn't either. So essentially, your
22 output would kind of lump together Feta, Gouda, Gorgonzola,
23 parmesan, provolone, Mozzarella, Hispanic, etcetera, etcetera
24 correct? As other cheese?

25 A. When you are aggregating the data for this, all of

1 those product categories go into other, that's correct.

2 Q. And you --

3 A. As I mentioned, this page 9 looking at the final
4 product categories, lists simply yogurt here. After this talk
5 was given, and for another research project, we disaggregated
6 yogurt into Greek yogurt and other yogurt. Okay?

7 So we would typically think about trying to
8 disaggregate things at a point in time when we have a
9 researchable question for which it's important to make that
10 distinction. You will also notice that there were four MPC
11 products, which seems like overkill perhaps.

12 Q. You might think that.

13 A. But that was for a particular research task that was
14 being done.

15 Q. So and that was a task where, is it fair to, to guess,
16 that somebody retained your services or the University's
17 services to model a specific project relating to MPC products?

18 A. It was, yes.

19 Q. Okay. And so over time, you know, what, you know, the
20 various elements of the model, what's in and what's out,
21 including that, have been craft, have been just evolved with
22 respect to what you have been asked to do.

23 A. Sure.

24 Q. Okay. Let me look at, or let's stay on Figure 2 there
25 a minute. On Figure 2, all these American cheese lines go one

1 way. Is that because they are only showing, I mean, why is
2 that? You are not, in any way, representing that cheese only
3 moves West to East in the United States?

4 A. No, no. In fact, there are a few locations here where
5 I can see in the State of Washington or even California, for
6 example where it is going East to West, so there are a few --

7 Q. Towards the coast? Do you mean towards the coast?

8 A. Sure. Sure.

9 Q. Okay.

10 A. But predominantly, and recall that this is a model that
11 would say if we had a completely coordinated supply chain where
12 one person could make the best possible solution, this would be
13 the lowest cost solution to move product in this fashion. We
14 know it doesn't all move in this fashion, and in many cases
15 it's because we have branding and product is going to move east
16 and west and north and south. And yet we would also recognize,
17 I think, from results like this, that that, in some cases, is
18 moving against an economic stream. You are swimming upstream.
19 There's a current there that makes it more difficult to do it.
20 Perhaps you can carry that on the basis of branding.

21 Q. Right. And that's because people are people and they
22 are not robots when they do these consuming things, right?

23 A. No.

24 Q. I mean, that's the effect of branding, isn't it correct
25 the effect of branding and other factors that can't be built

1 into a model like this, are the human factors involved in the
2 marketplace?

3 A. They could be built into a model like this, except that
4 we don't feel that that was important to answer the questions
5 at the time that the model was done.

6 Q. Okay. So there's been testimony in the hearing about,
7 for instance, yesterday, from cheese makers in Wisconsin, that
8 you know, they are selling cheese in California, and that's not
9 shown on here. At least I don't see any lines going from
10 Wisconsin to California. So is that because of branding? I
11 mean, they are swimming upstream in your view of the economics,
12 that's --

13 A. That's correct.

14 Q. -- that's depicted here. Is that because of branding,
15 quality, human factors, history?

16 A. Sure.

17 Q. All those things?

18 A. Yes.

19 Q. Okay. And the same thing for the fact that cheddar
20 cheese in Vermont has, it's been noted, is available in Clovis,
21 made in Vermont, has been branded in Vermont, is available in
22 Clovis. That's due to all those factors also?

23 A. Yes, it is.

24 Q. Okay. Let me go to Figure 4, if we could, in
25 Exhibit 133. So just in terms of arithmetic again, which is

1 about as high an order of calculation as I can do. Your
2 narrative says, "the difference between Central California and
3 Chicago is about 70 cents per hundredweight." So you're
4 comparing the 10 to the 80, is that what that number is?

5 A. Well, yes. We have the 10 to the 80, and that, yes,
6 precisely. I did look at specific points, and I think that it
7 was 77 cents was a difference between a location closes to
8 Chicago and in Central California.

9 Q. So I just wondered, just out of curiosity, why would
10 you compare Central California, which is a production center of
11 cheese, to Chicago which is, there aren't any cheese plants in
12 Chicago?

13 A. There are some pretty close. The reason I did that is
14 that conceptually when we think about what has to happen out
15 here, if we have major milk surplus regions, i.e. the West and
16 the Upper Midwest, if product is going to be competitive for
17 those East Coast markets, it has to get to a place, a point
18 like Chicago, for example, at about the same competitive price
19 before it moves onto the Eastern Metropolitan regions. And
20 that's why I chose Chicago. It is a bit random, but
21 nevertheless, this is showing you that there is a surface, a
22 flow that is generally from Northwest to Southeast.

23 Q. Right. Now, I understand that. But if you were,
24 really, if you were comparing cheese plants in California
25 versus those in, you know, in the Upper Midwest, you would be

1 comparing 10 to 60 in Wisconsin probably, so the middle of
2 Wisconsin or maybe 50 in Minnesota? Would you not?

3 A. With the exception that if we were competing for
4 Eastern markets, I doubt that we would take cheese up into an
5 enclosed pocket behind the Great Lakes before we would go down
6 to the south of them and move toward those Eastern markets,
7 that's why I showed that.

8 Q. But, and I understand why you showed that, but if there
9 will be persons in this, participants in this hearing who you
10 would well know would be wanting to use your testimony to base
11 milk prices off of, wouldn't you properly use your information,
12 if you wanted to do that, compare points of production to point
13 of production in terms of the relative difference?

14 A. Again, the model can choose to produce cheese where it
15 wants to in the volumes that it does, as long as there's a
16 plant in any location. So it's every bit as valid to compare
17 it to a New York state plant, for example, in here as well.

18 You make the case where you will, I guess, Marvin, but
19 it seemed sensible to me to think about it in a region where we
20 could both launch from points of economic competitiveness.

21 Q. Okay. So if you were launching from Minnesota and
22 California to a point in Chicago, Minnesota would start at 40
23 cents more than California, not 80 more.

24 A. It would have to get down to Chicago, yes. There's a
25 difference of price from there for sure, yes.

1 Q. Okay. And you may have explained this and I missed it,
2 but why would the model generate the lowest price in the area
3 of Northern California and Southern Oregon, which is the zero
4 circle as far as I can tell, where there's minimal milk and
5 minimal cheese?

6 A. And minimal population.

7 Q. And minimal population?

8 A. I mean, that's an important driver of all this, too.
9 It takes all of that into account at the time that it solves,
10 as well as the demand for all of the other dairy products in
11 here, so it's not just cheese that it's solving for, I'm only
12 reporting cheese in this one graphic.

13 Q. Okay. But all the other products factor into that as
14 well?

15 A. Yes, they do, sure.

16 Q. And tell me again. You don't, the model, I'm pretty
17 sure you testified to this and I made a note of it and I wanted
18 to try to understand. The model does not give any priority to
19 Class I production, correct?

20 A. No, it does not.

21 Q. Or 2 or 3 or 4?

22 A. No, they are all going to have their needs met.

23 Q. Now, on Figure 4, and again, you might have explained
24 this and I missed it, New England's white doesn't show any
25 price or anything up there, but we know there's cheese up there

1 in Vermont. So what does that mean?

2 A. Well, it is an indication that there's not much
3 processing that the model wanted to do in that area. There's
4 some. I mean, you can see, for instance, in, I'm not sure what
5 that, maybe Chateaugay location in Northern New York, there's a
6 plant that's being used and there's a smaller one in Vermont,
7 but again, the volume was small enough that the map just didn't
8 pick that up. So, nothing personal, but the model's rather
9 impassionate about that.

10 Q. And if it is not significant, it doesn't, not
11 considered to be significant within the model's parameters of
12 reference, it just doesn't show it?

13 A. You could color it out further if you want to. We
14 have -- we have done that occasionally in the past, this is
15 just where the particular mapping software that we do just says
16 there's not enough information out there to find the krieging
17 algorithm to color it further. So you are you are getting
18 outside the boundary at which I would say I'm confident in
19 giving you spatial milk values.

20 Q. You don't really know what the value might be up in
21 Vermont?

22 A. If it was really important to you for this particular
23 hearing, we could probably, you know, focus in on that.

24 Q. Okay. On Figure 3, which, you know, you explained why
25 we really can't read it, at least I can't. Do you know what

1 the, what the values were in in the Northeast?

2 A. You know, I can't read this, Marv, and I didn't go back
3 to look at that. We could pull up the document. I think that
4 it has some values in it. If it doesn't, we can -- we can lift
5 those values out of earlier model runs that were done from
6 saved data.

7 Q. Okay. Let's turn to Figure 5, which is on page 8.

8 A. By the way, I would say that the document that's
9 referenced here from which this map was taken --

10 Q. Yes.

11 A. -- has a much broader discussion about what this
12 Class III price surface actually is, or was. Or indeed the
13 other manufactured price surface was as well.

14 Q. That's the 98 iteration, or the 98 --

15 A. Yes, it is. That's correct. It's referenced, you can
16 pull it up, and it could be submitted if you would like to do
17 that.

18 Q. Okay. On Figure 5, which is on page 8. Would you
19 agree that the green areas showing increases in milk production
20 during the ten-year period here, imply that it was, that
21 document I guess, that it was profitable to produce milk in
22 those areas?

23 A. No. I think that it probably was, but I can't imply
24 that from what's happened here. There certainly has been
25 momentum, there certainly has been growth, and I would assume

1 that producers made decisions about how much milk they wanted
2 to produce based on that.

3 Q. But there could have been some collective irrationality
4 which led to some of these, some of these green outbursts?

5 A. Well, it is one of the issues that I think the dairy
6 industry has. We have, at the milk production decision level,
7 40,000 independent decisions that are being made, on a daily
8 basis, I might add, and it's not a coordinated supply chain.

9 Q. Okay. And those aren't decisions that you can, you can
10 model in any particular fashion, right?

11 A. We try to do that with the very different type of model
12 than I'm reporting here, but yes, they are very personal
13 decisions.

14 Q. Okay.

15 A. And reflect different groups of assets that people have
16 to work with.

17 Q. Okay. Now, going on to pages 9 and 10 in Exhibit 133.
18 Now, here's where you are discussing minimum class prices. And
19 at the top of page 10 you reference some of the history of USDA
20 use of regional prices for manufacturing milk values, in
21 particular IIIa or butter powder. Do you recall that?

22 A. I do, yes.

23 Q. Okay. And as you, I think, report, there was a time
24 that USDA experimented, if you will, with multiple regional
25 prices for those manufactured product values, correct?

1 A. And it goes back much further than this. I mean, USDA
2 and Federal Milk Marketing Orders had very different regional
3 prices fairly early in their evolution.

4 Q. Right. Yeah, and if you go back far enough, there were
5 probably, you know, 10 or 15 or maybe even more different
6 prices for the same manufactured product values in the system.

7 A. Yes.

8 Q. Okay. And over time, that has, policy has evolved in
9 USDA so that those regional price differences have been
10 eliminated, correct?

11 A. We have four product price formulas now.

12 Q. Right. And since 2000, the final decision in Federal
13 Order Reform in 2000, all of the regional differences in
14 Class III were eliminated so that there's one national price
15 for Class III and the same thing for Class IV, correct?

16 A. That's correct, and that was stated in here.

17 Q. Right. That was done by the USDA as a policy decision
18 when they had before them in the hearing record, among other
19 things, Figure 3 of Exhibit 133, correct?

20 A. Yes. That's correct.

21 Q. And other, and other, you know, price models that were
22 generated in that process of Federal Order Reform when you were
23 retained by the Department to provide input into the -- that is
24 you being Cornell generally -- retained by the Department for
25 input into the process?

1 A. Correct.

2 Q. Okay. So I think I have one final area of questions to
3 explore at the, and then I'll be done for now.

4 On page 14, the concluding sentence of the first
5 paragraph under summary, you express a fear that "imposing the
6 current, our current Federal Order Class III product price
7 formula on the California dairy industry could, over time,
8 affect cheese plant profitability sufficiently to cause a
9 significant shift in ownership of cheese plants from proprietary
10 firms to a cooperative structure where losses can be reblended
11 back to members."

12 Now, I want you to tell me where, if anywhere, you have
13 observed that occurring in the rest of the country that has
14 been under the current Federal Order Class III product price
15 formulas?

16 A. Well, Marv, that's why I put something like this in a
17 summary. This is based on, I guess what I would call my
18 professional judgment in looking at and working with an
19 industry over more than 30 years, and the concerns that I have.
20 That 30 cent difference that we had back in the 1990's for
21 cheese prices has been absorbed into the regulated pricing
22 system we have, with some problems in regions of the country,
23 as noted in the testimony, but has been workable. But I think
24 it's a different thing when we start to look at the
25 promulgation of 20 percent, an additional 20 percent of the

1 milk supply being regulated in the same fashion at a time when
2 that difference is much larger than the 30 cents we had before.
3 I'm concerned that it would cause disorderly marketing
4 conditions.

5 Q. My question was not precise enough, I fear.

6 A. Sharpen it. And I will try to answer it.

7 Q. Now, where, if anywhere, have you observed changes in
8 ownership of cheese plants occurring from proprietary firms
9 going from proprietary firms to cooperative structure in the
10 country?

11 A. In a regulated system?

12 Q. Yes.

13 A. I could look at the Southwest as an example, at least
14 partially. Other areas where we see the issue of profitability
15 being challenged in the Northwest, and you know, reblending
16 that has to occur back to members. It is an issue. That's not
17 a transfer of ownership, but I'm suggesting that markets will
18 win. At some point along the way they are going to have to
19 express what they need to express in one form or another, and
20 if we regulate a minimum price above market clearing levels,
21 there are relatively few release valves for that kind of a
22 problem.

23 Q. Okay. Do I understand that you have not actually seen
24 any change of ownership of cheese plants for proprietary firms
25 to a cooperative structure anywhere in the country?

1 A. I mentioned the Southwest where at least we have a
2 portion of a plant that has moved over to cooperative
3 ownership.

4 Q. Moved over or been built by cooperatives?

5 A. On the other side of the wall, that's correct.

6 Q. So there hasn't been any change in structure from
7 proprietary to cooperative there, has there?

8 A. No.

9 Q. Thank you. And is there, can you cite any instances
10 where what you fear will occur, has, in fact, occurred?

11 A. Not of, that I can think of off the top of my head,
12 Marv.

13 Q. Okay. With respect to, you have used the term, you
14 know, disorderly marketing. Is that, there's been a lot of use
15 of that term and it's basically been sort of in the eye of the
16 testifier at the time, or the beholder.

17 Are you -- let me try to relate that. I think you have
18 tried to relate it somewhere and I don't have the page here, to
19 market clearing issues. Is that fair? Do you relate those two
20 things?

21 A. Yes, I think that the term disorderly marketing is a
22 very fuzzy term. It's one of those things that we appear to
23 know it when we see it, but we have a hard time precisely
24 defining it. And I think that historically we have defined
25 this as market failure issues, where we had prices that perhaps

1 were spiralling downward out of control as a result of
2 competition and required at least regulation in the marketplace
3 to say, let's provide some boundaries at least for the markets.

4 Q. Okay. Do you understand it to put any constraints upon
5 the distances in which farm milk moves from farm to market?

6 A. I wouldn't describe disorderly marketing that way, but
7 I think that if we saw milk moving in both directions, for
8 example, then that would be a question mark. Why should it
9 move necessarily in two directions? Although we see this
10 sometimes.

11 Q. Right. For instance, you may or may not be aware in
12 California, because the state can't price interstate movements
13 of milk, it has led to movements that may occur because of
14 those regulatory conditions. Are you aware of that?

15 A. Yes, I am. And we have had instances in the past where
16 we had to have changes in Federal Order rules as well, Federal
17 Orders themselves, with pooling issues, for example, when, you
18 know, milk was either moving long distances to or at least
19 being pulled on distant markets.

20 Q. Mostly being pooled without moving?

21 A. Mostly being pooled without moving.

22 Q. Okay. I think I that's all I have right now, Mark.
23 Thank you very much.

24 JUDGE CLIFTON: Mr. Beshore, thank you. Who next has
25 questions for Dr. Stephenson? Mr. English?

1 MR. ENGLISH: I looked at my watch and I looked at the
2 court reporter, and we have gone now I think an hour and 35 or
3 an hour and 40 minutes, and she seems to be indicating the need
4 for a break.

5 JUDGE CLIFTON: All right. Let me get a show of hands.
6 The choices are break for lunch or break for 10 or 15 minutes.
7 So I would like to ask first, how many of you would prefer that
8 when we break now it will be for lunch? Please raise your
9 hand. And how many will prefer that we break for 10 or 15
10 minutes?

11 MR. ENGLISH: We can do either, I guess.

12 JUDGE CLIFTON: The majority want to break for lunch.
13 Dr. Stephenson, how long are you available to us today?

14 DR. STEPHENSON: I can be here the whole day.

15 JUDGE CLIFTON: Excellent. Thank you. Let us break for
16 lunch. Is it -- let me ask this, is it awkward for
17 Dr. Stephenson to accompany groups of proponents? I don't
18 know, you know, he's not --

19 MR. ENGLISH: That's up to him.

20 JUDGE CLIFTON: All right. So let him make his choice. It
21 is 12:20. Please be back and ready to go at 1:35. 1:35.

22 (Whereupon, a break was taken.)

23 ---o0o---

24

25

1 WEDNESDAY, NOVEMBER 4, 2015 - - AFTERNOON SESSION

2 JUDGE CLIFTON: We're back on record at 1:37. Who will be
3 the next person with questions for Dr. Stephenson? Mr. Vetne?

4 CROSS-EXAMINATION

5 BY MR. VETNE:

6 Q. John Vetne, representative for Hilmar Cheese.

7 Good afternoon, Dr. Stephenson. Thank you.

8 A. Good afternoon.

9 Q. Thank you for coming. While it's fresh on my mind, I
10 want to go to some of the recent questions and answers that you
11 had, I think the focus was on, on the conversion of
12 manufacturing facilities from proprietary to cooperative-owned.
13 Would you agree with me that the business model of a
14 cooperative is a bit different than a business model of a
15 for-profit corporation?

16 A. Yes, I would agree with that.

17 Q. And one of the elements in cooperative decision making
18 is to try to have a home for the milk of all members; is that
19 correct?

20 A. In most cooperatives, that's historically been the
21 case, yes.

22 Q. And have you observed, during your professional career,
23 that meeting that objective, occasionally, if not frequently,
24 requires a cooperative to operate a manufacturing plant at a
25 loss compared to a for-profit business model?

1 A. It is a cost that's borne by many of the cooperatives
2 that choose to have balancing services and functions in the
3 marketplace, that's correct.

4 Q. What do you mean by balancing services?

5 A. I mean that we have milk that is produced 365 days a
6 year, and not always demanded at all plants. Historically,
7 fluid plants have been processed seven days a week, and the
8 milk that is not processed has to be taken care of, and
9 cooperatives often will pick that up and either balance it
10 themselves or find other plants who are willing to take it, and
11 seasonally those imbalances in supply and demand are also often
12 challenging that cooperatives are picking up the additional
13 cost of balancing the marketplace.

14 Q. And beyond just balancing a market for Class I
15 purposes, there are occasions when just the supply exceeds
16 demand for Class I and II, and it has to put somewhere. Is
17 that also a component, finding a home for that milk?

18 A. Yes. It's not always manufactured by the cooperatives,
19 but typically they will be looking for a home for that wherever
20 they can, and that's often found in other manufactured and more
21 storable dairy products.

22 Q. Would you agree with me that the cooperative
23 manufacturing practices in the Pacific Northwest where
24 cooperatives, several, more than one cooperative operate both
25 cheese and butter powder facilities, that that is a function

1 served by those plants to find a home for the cooperative milk?

2 A. Yes, I think that those cooperatives and those plants
3 are doing just exactly that.

4 Q. Yeah.

5 A. As well as just markets for the member product anyway.
6 It is not always just a market of last resort, but they have
7 regular channels, of course, that they are also servicing.

8 Q. Whenever a cooperative operates a manufacturing plant,
9 whatever the objective, find a home for milk or balancing the
10 cooperative, will, and has a fiduciary duty to, its members to
11 market at the best prices they possibly can, correct?

12 A. Absolutely.

13 Q. Have you observed circumstances where the surplus or
14 residual supply of the market has moved from being processed by
15 proprietors to cooperatives, though not necessarily in the same
16 product mix, such as it became unprofitable to operate a cheese
17 plant so the cheese plant closed and then that volume went to
18 either an existing or newly constructed cooperative powder
19 plant?

20 A. Yes, there certainly have been any number of instances
21 where proprietary or cooperatively-owned plants have been
22 closed and the volume of product moved somewhere else, and
23 usually it's, if there are cooperatives marketing in the area,
24 they are the ones that have done the work and absorbed the cost
25 of finding the home for the product.

1 Q. Okay. And just as a matter of practical common sense
2 investment, where there is an opportunity for a proprietor to
3 build a plant and make a profit, projected profit, you would
4 expect to see a proprietor engaged in that function in that
5 market?

6 A. Yes, I would. But I mean, maybe restate the question,
7 that seems more like a conclusion than a question.

8 Q. It is a conclusion. I'm asking if you would agree,
9 because I want to go the Pacific Northwest. There isn't a lot
10 of proprietary cheese making done up there, is there?

11 A. Not in the Northwest, no.

12 Q. Okay. And you are aware that cooperatives there have
13 occasionally suffered challenges, if not losses, because of
14 federal pricing, and have done what they could, including
15 depooling milk and blending those costs back to their
16 producers?

17 A. Yes, I'm aware of that.

18 Q. Okay. Now, I want to go to page 4, and I have to go to
19 my desk for just a second and get my little screen.

20 JUDGE CLIFTON: Certainly, Mr. Vetne. So we're in
21 Exhibit 133, page 4.

22 MR. VETNE: That is correct, your Honor.

23 BY MR. VETNE:

24 Q. The least cost American cheese processing location in
25 flows shown in this map, does, for that product, the model use

1 data, from say March of 2014 on the volume of American cheese
2 produced in California and find a most efficient distribution
3 for that cheese?

4 A. No, the model doesn't know that. What the model has
5 done is to, in the data that we are pulling together and
6 supplying to the model, it would determine what the domestic
7 consumption needs were in that particular month in every county
8 of the contiguous 48 states, and for export, and for changes in
9 stock levels of those products. And it would then, through
10 solution, try to find the least cost means of supplying that.
11 So the model's pretty agnostic as far as where does the product
12 come from, as long as it achieves the lowest cost.

13 Q. Okay. So as to where the product comes from, the model
14 solves production and distribution efficiency nationally,
15 correct?

16 A. That's correct.

17 Q. Okay. Let me see if I understand a bit more about the
18 what the model does. Say we're looking at California. The
19 model knows something about the population of California,
20 correct?

21 A. That's correct.

22 Q. And the model knows something about per capita
23 consumption of fluid milk products, correct?

24 A. Correct.

25 Q. And the model solves demand for fluid milk in the least

1 efficient manner possible, correct?

2 A. The most efficient.

3 Q. Boy, yes, thank you for getting that.

4 JUDGE CLIFTON: Now, Mr. Vetne, you switched gears on me,
5 because you had directed his attention to American cheese and
6 you just said milk. So I just want to make sure we're still
7 talking about --

8 MR. VETNE: We digressed.

9 JUDGE CLIFTON: Okay.

10 MR. VETNE: We digressed from Figure 2 for a moment.

11 JUDGE CLIFTON: Okay.

12 BY MR. VETNE:

13 Q. And the model does something similar for soft products,
14 class, Federal Class II. It knows the population, it knows per
15 capita consumption, and will find a least cost source of milk
16 and distribution in California, if that's available, correct?

17 A. That's correct.

18 Q. Okay. And the same would be true for Class III and IV.
19 The model knows something about per capita cheese consumption,
20 population, and for --

21 A. For the products that are involved in Class III and IV,
22 that's correct. This is a product-driven model, but once those
23 products are derived, then we can look at the value of milk
24 going into the plants producing those products that we
25 associate with Class III or 4b, or whatever it happens to be.

1 Q. Okay. So basically if there is, in this model, and
2 again, using California for an illustration, if there is
3 production exceeding local demand for milk and milk products of
4 that population, the model seeks to export milk in the former
5 products, or even fluid if the model can solve it, in the most
6 efficient way possible.

7 A. That's correct. And of course there are cross-state,
8 cross-border movements here of milk and other dairy products.

9 Q. Okay. Do you have Exhibit 30 in front of you, or
10 nearby?

11 A. I do.

12 Q. Handy? Let's see, on numbered page 20 in the version
13 that appears on my screen here, there are flows for fluid for
14 May 2006, and flows for cheese for May 2006, at a fuel cost for
15 cheese of \$2.36 per gallon. Do you see that?

16 A. I do. Uh-huh.

17 Q. And I'm looking at that map and eyeballing it and
18 comparing it a little to, well, not a little, totally to
19 Figure 2 in your testimony. And it looks like the distribution
20 flow in Exhibit 30, page 20, is a bit broader and a bit more
21 robust than in your testimony in Figure 2. Is that because the
22 Exhibit 30 flows were for cheese, and in your testimony the
23 flows were for a portion of the cheese being American cheese?

24 A. You know, my apologies, but I don't remember. This was
25 several years ago when this was created. The title says

1 cheese, I'm going to assume that it was for all cheese,
2 aggregate cheese, as opposed to American cheese, but I don't
3 know that for sure.

4 Q. Okay. And do you recall, because there were similar
5 product flow, there was similar product flow information and
6 mapping in the 1996 report based on calendar year 1993, milk
7 and product production, which was also labeled cheese.

8 Do you recall whether that was all cheese or --

9 A. I don't. I would really have to go back and look.

10 Q. Okay. So you were -- you were asked some questions
11 what the model does not include. It does not include, if I
12 could categorize that, any human decision which would create
13 inefficiency or cost above the most efficient distribution.

14 A. That's correct. I mean, there are really only three
15 human decisions that are considered in this model, or taken as
16 given. That is, the decision for how much milk to produce and
17 where, how much dairy product to consume and where, and where
18 were plants built to produce certain products.

19 Q. Okay. Oh yeah, that's the other thing. I remember the
20 1996 report on 1993 data showed a triangle just in North
21 Georgia distributing cheese into Florida. There's no
22 significant cheese capacity in the Southeast anymore, is there?

23 A. Not much, no. They are very small.

24 Q. Okay. So let's take a couple of illustrations of
25 what's not in there. I'm going to ask you, you know, if you

1 introduce that component, how it might affect the observations.
2 Let's say that California consumer demand for cheese, 30
3 percent of it is satisfied by cheese coming from someplace
4 else, either from across the ocean, or from Washington, Oregon,
5 or from Wisconsin, Idaho it doesn't matter, but 30 percent of
6 consumption is from outside of California, which the model
7 would not accept because it is inefficient, but what would that
8 do to the distribution flow from California of now 30 percent
9 has been displaced?

10 A. Let me ask a clarifying question --

11 Q. Yes, please.

12 A. -- if I might. For example, are you saying that that
13 demand existed but we're satisfying it from outside the area --

14 Q. Yes.

15 A. -- or that we simply no longer have 30 percent of the
16 demand in California that we did?

17 Q. Yeah, the demand is exactly the same as the model.
18 They are, the demand is an existing demand, but 30 percent of
19 it is satisfied from cheese originating outside of the state.

20 A. And this is something we could do. We could say, for
21 example, I want to make sure that 30 percent of the cheese
22 that's consumed in California is processed in Vermont, or
23 something like that. And if you do that, what you observe
24 always is that you have increased the cost to the model for
25 having imposed that additional constraint on it, and it does

1 have to reorder essentially everything that's there to a small
2 degree, or potentially could reorder that. So, for example,
3 the milk that would have been used from California to process
4 into cheese and otherwise flow into other parts of maybe most
5 likely the Southeast, might be looking for an additional home
6 somewhere else, perhaps even back in Vermont, although, less
7 likely.

8 Q. Okay. And if there were capacity in California to
9 handle it, there would be additional product produced, so
10 whether it's cheese or nonfat dry milk --

11 A. That's true.

12 Q. -- and that who have to be marketed someplace.

13 A. That's correct. As I said, anything that's an
14 additional constraint along those lines or that would happen,
15 will increase the cost to the whole system.

16 Q. Okay. So to the extent that there are, as we know
17 there are, human decisions that create costs that are
18 unacceptable to the model, the model provides, as I understand
19 it, some kind of directional indicator of where the prices and
20 price relationships would go; is that right? You start with
21 the most efficient, and once you add costs, you sort of know
22 the direction but you don't know where it ends up.

23 A. Well, when the model has solved the solution, we can
24 look at these dual values, if you will. And it is essentially
25 saying, what we would be willing to pay, or up to how much

1 would we be willing to pay for an extra hundredweight of milk
2 to just drop in out of the sky at this particular location? In
3 other words, by how much could I reduce the entire cost of
4 solving this U.S. dairy model if I had one more hundredweight
5 of milk at this point at this location? It is a marginal value
6 of the milk and product at that location.

7 Q. Okay.

8 A. And you are now suggesting, I think, through this
9 question, that we would have the equivalent of another 30
10 percent of the milk used in cheese consumption in California
11 available in California, potentially, to be used for cheese
12 manufacture or butter powder manufacturer or fluid milk or
13 anything else.

14 Q. Okay. And following that, let's assume the 30 percent
15 is displaced. If we use the model for a starting point, how
16 would you expect to see that, if it is perceptible, in a price
17 surface, as on page 7?

18 A. Those additional quantities of milk in that area that
19 are not satisfying its highest and best use at the time, would
20 be expected to lower the marginal value of milk, and likewise,
21 the additional demand or requirement for that milk, say, in a
22 plant in Vermont that's now making this cheese, would be much
23 higher as well, because we need more milk now in that area to
24 process the cheese that's now being used for California.

25 Q. Got it. Okay.

1 A. So it has the effect of increasing that price surface,
2 the slope of that price surface.

3 Q. Okay. Thank you. Now, digressing just for a second.
4 On Exhibit 30, I think it was page 9, one of the products that
5 is now included or can be included, are casein and caseinates.
6 I asked a prior witness what that was and the witness didn't
7 know, so I'm asking you. What is that product?

8 A. Well, casein is the other milk protein or the category
9 of other milk proteins other than whey proteins. And it is
10 usually derived from milk with an acid-based solution that
11 causes it to coagulate and flocculate out. Caseinates are a
12 bit more soluble, and I believe are treated with sodium
13 hydroxide, I think.

14 Q. You said protein other than the whey protein. So in
15 cheese making, casein is a subcomponent of the proteins in
16 milk; is that correct?

17 A. That's correct.

18 Q. And in cheese making, casein is the protein that
19 remains in the cheese that provides desired cheese
20 functionality?

21 A. Yes, that's correct.

22 Q. Okay.

23 A. Most of the casein stays in the cheese.

24 Q. Okay. You responded to a question by Chip English that
25 that the model wants to account for every bit of component.

1 The model's designed to avoid creating components where they
2 don't exist or losing components in the process, correct?

3 A. That's correct. There is a certain amount of shrink in
4 the U.S. system and a certain amount of shrink that's allowable
5 in this model as well.

6 Q. Okay. So that was my next question, because when you
7 were discussing whey, towards the end of your statement on
8 Page 12, Figure 7, total solids and whey shipped for further
9 processing, and you calculated some cost for that. A cheese
10 maker that does not have whey processing facility at the cheese
11 site to produce a final marketable dry whey product, as I
12 understand it, that cheese maker will either partially
13 dehydrate the whey, but usually dehydrate the whey, if they
14 can, and pump it into a truck. And the truck comes to a
15 consolidator, it's pumped out of the truck, and then into the
16 plant where the final whey product is made. But in that
17 sequence of transactions, going through a pipe and going into
18 the truck, and coming out of the truck, there are some solids
19 lost.

20 So my question is, when you calculated the per pound
21 costs here, the more solids that are lost, the more cost there
22 is per pound. How did that, did you factor that in or did you
23 simply take the whey stream coming out of the cheese and apply
24 a cost to that whey stream without shrinkage?

25 A. I didn't include shrink in these costs, so this is just

1 a theoretical yield that is taken from the answers that were
2 given in the plants, as though they had processed this with the
3 whey that we also asked composition questions about. So we got
4 responses from the folks from the survey as to what their, in
5 composition of the whey was, the raw whey.

6 Q. The raw whey coming out of the whey stream when cheese
7 was made?

8 A. That's correct.

9 Q. Okay.

10 A. And what the composition was, at least of total solids,
11 in the product that they were partially dehydrating and sending
12 on. But it didn't account for shrink.

13 Q. And there is, in fact, shrink?

14 A. There is, in fact, shrink, yes.

15 Q. And if whey cream is not separated in that process,
16 butterfat and whey cream tends to adhere to surfaces of pipes
17 and trucks more than the other solids, correct?

18 A. It does as I understand it, yes.

19 Q. Okay.

20 A. But I will also say that most of the respondents in
21 here were separating their whey cream.

22 Q. At the plant where they make cheese?

23 A. At the plant where they make cheese.

24 Q. Okay. So at least on that portion of the whey, they
25 would be operating similarly to the large plants that have

1 their own whey processing and final product manufacturing?

2 A. Those first few steps are likely very similar, that's
3 correct.

4 Q. Are there -- are there any cheese plants that convert
5 whey cream into a final marketable product?

6 A. I am not aware of any, John, but it could be the case.
7 That was a question that wasn't asked.

8 Q. Okay. It is commonplace, if not universal, for whey
9 cream to be collected at a cheese plant and then put in truck
10 and sold as whey cream to a buyer that does something with it,
11 correct?

12 A. Yes.

13 Q. Okay.

14 A. Common practice.

15 Q. I forgot a question on page 7. If you will go back to
16 your prepared statement. In the top line you say that "since
17 1995, the USDSS model has been updated." And I wondered
18 whether model meant something that the program does as opposed
19 to something, different data that goes into the program.

20 A. In all cases with this statement, I would be indicating
21 that we are updating the data that goes into the program. In
22 many of the instances where we have updated the model, we have
23 also been updating the structure of the model to do something
24 that it hadn't done before, to disaggregate product categories
25 into, you know, the larger list that you had asked about on

1 page 9 of --

2 Q. Exhibit 30?

3 A. Exhibit 30.

4 Q. Okay. Oh, in response to a question from Mr. Beshore,
5 you answered in the affirmative that there is one national
6 price for Class III. Do you recall that question and that
7 answer? You said yes?

8 A. If I answered it precisely that way, I would have said
9 for Federal Milk Marketing Orders.

10 Q. That wasn't my question. So Class III --

11 A. But that would have been true for Class III, correct?

12 Q. Well, it depends. Actually, there is a State Class 3,
13 but it is not cheese. But the Class III price does not apply
14 throughout the nation on all milk used to produce cheese.

15 A. That's correct.

16 Q. So it is a, it's a component of national prices for
17 cheese, some of which are not subject to the Federal Class III
18 price at all, correct?

19 A. That's correct.

20 Q. You mentioned something about, in response to an
21 earlier question about imports or exports.

22 And so explain how the model captures, if at all,
23 products such as nonfat dry milk or skim milk powder or cheese
24 in demand in the export model. You did say that the model
25 meets a hundred percent of consumer demand where there are

1 exports. I assume some of those consumers are foreign
2 consumers, but maybe not. So explain how exports and imports,
3 if at all, are factored in the model.

4 A. Yeah, we do account for all of the trade in dairy
5 products, imports and exports. It does occur in a few more
6 than three ports in this country, but the largest volumes of
7 which are captured on the West Coast, and we do have ports in
8 all of the three major waterways; the Pacific, the Atlantic,
9 and the Gulf Coast region. So the model will bring product in
10 from there, will export product at that point. And we only
11 consider it delivered to those ports as being the final demand.
12 We don't try to, in this version of a model, track it to its
13 ultimate destination by country or anything of the sort.

14 Q. Oh, okay. So if I'm observing something on the cheese
15 map on page 4, to the extent that the model accounts for
16 exports, if it is West Coast exports, it would be cheese going
17 to the Pacific Ocean and that's where it stops.

18 A. That's correct. In fact, there's really quite a heavy
19 line that's going from Central California, the Fresno area
20 here, down to Los Angeles, and a portion of that is export of
21 cheese out of the Los Angeles port.

22 Q. I got it.

23 A. And I think that --

24 Q. Is there a similar line near New York City, or
25 New Jersey up on top?

1 A. Yeah, although I'm trying to recall whether there were
2 actually any shipments out of those ports from the model
3 solution.

4 Again, you know, this would be a short distance of
5 movement to go from Central California to a port, then it would
6 from, say, Western New York over to a port that's -- it may be
7 satisfying just domestic demand for product as well. I can't
8 really disaggregate that from here, but --

9 Q. Okay. Can you --

10 A. But exports are certainly covered.

11 Q. Was it Galveston, Houston, one of those ports?

12 A. Houston was the port in the Gulf Coast.

13 Q. Yes.

14 A. And I think it's New York City, the port in the East
15 Coast, and Los Angeles, the port in the West Coast.

16 Q. Got it, okay. On the top of page 11, the last two
17 sentences. I just want to make sure I understand your use of
18 the word product in those last two sentences. Three lines up
19 from the bottom of that top paragraph you refer "to process a
20 portion of the whey into some form of product for sale." And
21 then in the next paragraph you conclude with "into a final
22 product for sale." So final product means some sort of dry
23 whey product that has a market that can be stored, and at least
24 some of those products are reported that have published average
25 sales, correct? It is a final product?

1 A. Yes.

2 Q. Whey protein concentrate, whey protein isolate, that
3 kind of thing?

4 A. Right.

5 Q. And when some form of product for sale, is that a
6 universe that includes both final products and wet products
7 that have to be further processed?

8 A. That's correct. Mostly it is wet products in reference
9 to that first paragraph there, but it is a product that
10 actually has a transaction that occurs. It's not a final sale
11 necessarily. It is a sale to a plant that is likely to be
12 processing this into a dry final product.

13 Q. Okay. Now, I have a question on page 13, Figure 9.

14 A. I wish I hadn't put that in there.

15 Q. I love it. I like the whiskers thing. I can show it
16 to my cat.

17 You said that this is a frequency during that time
18 period at which certain range of costs occurred, that's the way
19 I understood it, correct?

20 A. That's correct.

21 Q. But you also explained that the costs that went into
22 this bar graph included the 12-point -- 12.79 cents per pound
23 solids that you explained in the preceding text.

24 A. That's correct.

25 Q. My question to you is, I'm looking at the far left bar

1 and it looks to me like that's about 5 cents or less. How can
2 12.79 cents be accounted for in a bar that only goes up to 5
3 cents?

4 A. Product price formulas can generate negative values for
5 other solids.

6 Q. Okay. So during this time period, there was a month or
7 months in which the whey component in the Class III price
8 actually resulted in a subtraction from the cheese price minus
9 make allowance?

10 A. That's right. It would have been a negative value in
11 the product price formula.

12 Q. Okay. Good. That is really, really helpful, because I
13 was scratching my head. That's all I have for now. Thank you
14 again, so much.

15 JUDGE CLIFTON: Who next has questions for Dr. Stephenson?
16 Ms. Taylor, would you like to ask some now? It may generate
17 some other questions.

18 MS. TAYLOR: I do have some questions. I didn't know if I
19 would have any left after everyone else got done, but I do.

20 JUDGE CLIFTON: State your name for us.

21 MS. TAYLOR: Erin Taylor with USDA.

22 CROSS-EXAMINATION

23 BY MS. TAYLOR:

24 Q. Good afternoon, Dr. Stephenson.

25 A. Good afternoon.

1 Q. First, thank you for coming out here today and
2 participating in this proceeding as a -- not in support of, or
3 in opposition to any proposal.

4 I first want to talk about your model write up and then
5 we'll concentrate on whey. I just want to go over the
6 difference between, for the record, the primal solution and the
7 dual solution, just to make sure it is clear. So I can either
8 tell you what I think and you can tell me I'm wrong and correct
9 me, or you could just go ahead and let me see if I can
10 interpret what you told me again.

11 The way I read the primal is kind of like the least
12 cost combination of assembling milk needs, kind of a total cost
13 look, whereas the dual is a marginal look.

14 A. That's correct.

15 Q. Okay. On page 4, on Figure 1, and I think this might
16 just be a printing issue with the different colors, but in
17 California, some of the lines look light blue. But are they
18 supposed to be green?

19 A. No, you are correct that they are actually light blue.

20 Q. Can you explain what those are for? Because I don't
21 think we have been over that yet.

22 A. Yes. Those are actually, the model is moving product
23 to ice cream plants as well, so these are nonfat solids that
24 are moving to ice cream plants.

25 Q. So they are moving towards the triangles, not away?

1 A. That would be correct, yeah. I'm sorry about that,
2 that it wasn't listed here, but we do have a number of
3 different colors that we use to represent movements of
4 different products in there, and I guess that I hadn't even
5 looked to see whether this was picking up those couple of the
6 other product that can flow as well.

7 Q. Okay. In Figure 2 where we have the plants and moving
8 towards the demand points, and there's been some discussion,
9 but just in a simplistic form, you tell the model where the
10 plants are, and you tell the model where the demand is, and the
11 model comes up with where the orange lines should be?

12 A. That's correct. This was, again, taking into account
13 all of the products that we have to produce simultaneously.
14 These long-distance shipments of cheese that you are seeing in
15 Figure 2 were part of the least cost solution that the model
16 could find.

17 Q. Okay. And do you know that the model doesn't take in
18 any type of plant capacity constraint?

19 A. We don't have that turned on in this solution because
20 we don't know in all cases what the plants are capable of
21 processing. We do know on a number of locations what plants
22 are capable of doing, but we don't know all of them, and so we
23 typically have not chosen to capacitate the plants.

24 Q. Could you, if possible, explain, I guess, what the
25 impacts of not being able to have that constraint might -- and

1 I would initially think that the model could then predict that
2 a plant that you have in here would produce an excess amount of
3 product that's just not capable of producing, and that would
4 have, you know, effects down the line of where the milk, how
5 you get your milk and then where the product goes, and you
6 know, ripple effects?

7 A. Yes, and that's absolutely correct. That if the model
8 chooses to operate a plant well above it's actual capacity,
9 then, you know, if it can't do that in the real world
10 currently, in the short-term at least, you know, a plant is not
11 going to process all of that, and it would have to be processed
12 at another one of the locations in here. So giving the plant
13 the freedom, or giving the model the freedom to select its own
14 plant sizes, if you will, will reduce the costs more than we
15 would see in the real world. But I do have that second check
16 that I think is actually pretty important, and that is to say
17 at least by region this is replicating what's produced in the
18 region very closely.

19 Q. Okay. On fuel costs, does the model have one singular
20 fuel cost or fuel costs by regions?

21 A. Fuel cost by regions. We have an index of fuel values.
22 They are different across the country. California's much
23 higher fuel costs than you would note in, say, Texas, for
24 example. And the model's transportation cost functions pull on
25 that index to increase those costs in areas where they are high

1 and to reduce them where they are low. The same thing is true
2 for labor costs.

3 Q. Okay. I do want to move to the whey portion of your
4 testimony. And if the Judge would indulge me, I don't know if
5 I have an extra one around here, when I'm asking questions, I
6 want to actually refer to Exhibit 123, that was entered on
7 Monday I believe. If we could get the witness a copy. Thank
8 you, Judge. Appreciate it.

9 I won't refer to that one at first, I have other
10 questions, but just so you have it up there. And just, I'm
11 going to, on Exhibit 123 that was entered by Dr. Schiek on
12 Monday, in there is a Wisconsin whey study, and that's
13 specifically some questions. I just want to compare some of
14 the things you have to what's in here.

15 So first on your survey, you had 88 responses and 62
16 were complete, but how did you choose the cheese plants that
17 you surveyed? What was your population of plants and response
18 rate, etcetera?

19 A. We made an attempt to assemble a list of cheese plants
20 and contacts in those plants across the country. That's still
21 not complete, but I do have excellent representation from the
22 Northeast, from the Upper Midwest, from the far West, and from
23 quite a bit of the Mideast as well. So we have, we think, most
24 of the plant capacity in the country. But we're continuing to
25 collect that information. We send that off to plants as we get

1 new data about where the plants are located.

2 Q. And do you have any idea of the percentage of cheese
3 production your survey covers or the percentage of whey
4 production that your survey covers on the volume basis?

5 A. I don't at this point, but I, it is a calculation that
6 we could do, by looking at the amount of milk the plants say
7 that they have processed, and making some judgments, and the
8 types of cheeses. We also ask about the kinds of cheeses that
9 are being processed in these cheese plants, making some
10 judgments about yields. So we could get at least a rough idea
11 about what percentage of product is represented in the plants.

12 Q. Okay. And on page 10, one of the, on Table 2, one of
13 the line items is "plants were regulated under a State Order."
14 Would that include, California is a State Order, there are
15 other state orders, but is that primarily California plants in
16 there or does that include other plants?

17 A. Well, without trying to divulge other plants, it does
18 include some operations not in California.

19 Q. Okay. That's what I was wondering. Now, I want to
20 refer to page 24 of Exhibit 123, if I could, and then compare
21 it to page 10 and 11 of your testimony.

22 So on Monday, Dr. Schiek and Mr. Fish from Saputo
23 entered in this study on whey processing in Wisconsin, and they
24 talked about, and other cheese plants we have had come here
25 have talked about the level of whey processing that they have

1 done in their plants, whether it is what they call minimal
2 processing or cooling and UF'ing and then shipping it. And I
3 was wondering on this, and it is not labelled, but on this
4 chart there's different levels of processing, where that would
5 fit in your first paragraph on page 11, when you say, and this
6 goes to Mr. Vetne's questions, "15 percent of plants processing
7 100,000 to 2 million pounds, process a portion of the whey into
8 some form of product for sale." And I was just trying to see
9 if you could relate that to the different levels of processing
10 in this table.

11 A. Yes. If plants had been skimming the whey stream, and
12 if they have been pasteurizing the whey stream and cooling it,
13 then I considered that to be processing level, so they were
14 doing something. They weren't shipping hot whey.

15 Q. And can you define skimming the whey stream for the
16 record?

17 A. Yes, I meant removing some portion of the whey cream.

18 Q. Okay. And then the final product for sale would be
19 either the, perhaps the commodity processing or value-added
20 processing.

21 A. It would have included the value-added processing, so
22 it could have included some of the UF'ing. I mean, the minimal
23 processing that they had here for me, would have been skimming,
24 pasteurizing, and cooling.

25 Q. Okay.

1 A. Additional processing would include UF or RO or both.

2 Q. In the last line in that first paragraph, "83 percent
3 of plants processing more than 2 million pounds of milk per day
4 are processing some or all of their whey into final product for
5 sale." Do you know how many plants that is? Because the
6 breakdown on the previous page doesn't have a 2 million
7 breakdown.

8 A. No. And you know, this was a little bit arbitrary on
9 my part, but I looked for natural breaks in the observations
10 that we had, and it was pretty clear that at that 2 million
11 pound area we had a gap in number of plants, and that there was
12 a significant amount of processing that was occurring on those
13 plants that were above that 2 million pounds. I could have
14 provided that extra breakout perhaps, if it would not have, you
15 know, revealed too many more categories of plants, but I don't
16 think it would have. I think it would have been fine.

17 Q. Okay.

18 A. Because the 1 to 3 had, a large number of 3 million
19 pounds of milk a day, had a large number of observations.

20 Q. On that same paragraph, my other note has, you talk
21 about the making some form of product for sale. There's been
22 some discussion of smaller cheese plants shipping their whey to
23 a larger company, and in some aspects, that company, both
24 plants are owned by the same company, so there wouldn't
25 necessarily be a sale, I think that's how it's been discussed

1 on the record. Would that transaction show up somewhere in
2 here, that plant-to-plant movement, if it's both plants were
3 owned by the same company?

4 A. No, and, well, again, there's not that level of detail
5 in this survey to be able to tell exactly how that transfer
6 takes place, although we did ask a little bit of question about
7 that. But in my experience, plants that are transferring some
8 of their product often have mechanisms for valuing it one plant
9 to another, even though it is an internal transfer. But, you
10 know, those are data quite often that I don't like to report,
11 because they can look quite distorted.

12 Q. If you would turn on page, let's see if I can find it.
13 Well, let me ask a different question. On your processing
14 costs that you discuss on page 12, and part of that is in
15 Figure 8, I guess. Just can you, would that be considered,
16 like a make allowance?

17 A. It could. But, you know, I do want to qualify this at
18 a very early stage to say I picked one type of processing,
19 that's ultra-filtration. And in the report that I have done
20 here, I picked right at the average volume that would have been
21 processed by these plants. There are certainly more than one
22 type of processing that are being done at these plants, there's
23 quite a range in size, so I'm reporting only one. But it does
24 mimic reasonably well the 3x concentration, the average total
25 solids that we saw in the reported whey streams.

1 Q. Okay. I think my final question, on page 14, your
2 Table 3, one of the lines it says "on a liquid basis per
3 hundredweight" and that's 20 percent. I guess that's how they
4 determine the value for whey sold. But could you just explain
5 what that means? The other ones I understand they are based on
6 a WPC 34 price plus or minus, but what's on a liquid basis per
7 hundredweight?

8 A. It's largely a fixed value, so over time. So if a
9 plant was shipping a certain volume of milk, or of whey to
10 another operation, they have agreed ahead of time that they
11 will pay so many cents per hundredweight for the whey.

12 Q. As opposed to the final line when it is on the pound of
13 solids?

14 A. That's correct.

15 Q. Okay. I think that's all I have. Thank you very much.

16 JUDGE CLIFTON: Dr. Stephenson, I remember one of your
17 statements, and I wondered how people solve this problem. You
18 mentioned that many times plants operate five days a week to
19 take in the raw milk, but of course the cows are milked seven
20 days a week. How is that typically addressed, if you know?
21 You mentioned co-ops, but how would it typically be done
22 between dairy farmers and proprietary plants?

23 DR. STEPHENSON: Well, most proprietary plants that would
24 process, they are going to have their own milk supply, may not
25 have a full milk supply. They may purchase at least a portion

1 of their milk from cooperatives, and then, once again, the
2 cooperatives are doing essentially the balancing. In maybe a
3 few cases, a proprietary plant would have to contract with
4 another plant for sale of that product on a regular basis to be
5 processed, but that's not common. It's mostly the cooperative
6 structure that is balancing the U.S. dairy system. They may do
7 this in conjunction with proprietary plants, cheese plants, or
8 otherwise, that are willing to take that additional milk and
9 process it on the weekends or during the heavy milk supply
10 portions of the year.

11 JUDGE CLIFTON: What other questions are there for
12 Dr. Stephenson? Mr. Beshore?

13 CROSS-EXAMINATION

14 BY MR. BESHORE:

15 Q. Marvin Beshore.

16 Just one question, but one comment first. I appreciate
17 your comments about balancing in response to the Judge's
18 question, because those costs and burdens which are taken on by
19 the cooperative sector are basically not recognized in the
20 system in terms of any regulated prices or compensation, and so
21 I appreciate that.

22 My question is, you made some comments in Exhibit 133
23 about the Pacific Northwest and market events up there. And in
24 response to a question from John Vetne, which was very long,
25 and included the, as I understood it, to which you responded

1 yes. Okay? A long question to which you responded yes. It
2 included the assertion that losses experienced by cooperatives
3 in the Pacific Northwest, were caused by Federal Order pricing.
4 Did you mean to say that?

5 A. Caused by? No. I guess that it is possible to avoid
6 Federal Order pricing should an area like the Northwest not
7 wish to have that there, or wish to pool plants in that region,
8 they would have the opportunity to not pool the cheese plant,
9 for example, if they didn't want to. So the plants may not
10 have experienced that pricing that would have caused problems.

11 Q. Well, what -- and I think in your in 133 here, you said
12 something to the effect that, events up there have been, you
13 know, exhibit disorderly marketing conditions or something to
14 that effect. Did you so testify? Do you recall that?

15 A. I'm not sure that I used the word under that particular
16 circumstance. I would have to look back here, Marvin, I guess,
17 to see. But I have indicated that it has been a problem for
18 the Northwest for a good many years.

19 Q. Okay.

20 A. Not always, but periodically.

21 Q. Isn't the biggest problem for the manufacturers in the
22 Northwest, the California competition which has been, which is
23 their regional nemesis and which is substantially the regulated
24 minimum price for which is substantially below their regulated
25 price? Isn't that their biggest problem?

1 A. I think that has been an issue, but there's also a lot
2 of unregulated milk in Idaho as well.

3 Q. What are you talking about when you are talking about
4 the losses in the Pacific Northwest, specifically? What's your
5 basis for the knowledge about them?

6 A. This goes back a good many years.

7 Q. How many?

8 A. Probably 15 years.

9 Q. Pre-Reform?

10 A. Or just about at the time of Reform, actually.

11 Q. Okay.

12 A. At the point of Reform, there were -- there were
13 problems that the USDSS model projected that would be shown, I
14 guess, in the dairy system in the country. One of them was
15 going to be pooling. So that if we collected the proceeds from
16 classified pricing and distributed them back to producers
17 according to a Class I price surface, which is the zoning that
18 we have used typically in Federal Milk Marketing Orders, that
19 there would be problems at the borders. This is something that
20 we discussed, it was something that did occur, and it was
21 something that had to be taken care of by modifications to
22 those plants.

23 We also talked about the likelihood of problems in the
24 Northwest at the time, and it has been a problem for the
25 Northwest more during some periods of time than others.

1 Q. But what has been a problem? What are you testifying
2 to that has been a problem?

3 A. The problem is a regulated minimum price that gave them
4 problems being competitive with other milk supplies.

5 Q. Competitive within what marketplace? With what -- in
6 what manner?

7 A. Well --

8 Q. Are you talking about product markets or what markets
9 are you talking about being competitive in?

10 A. Products, for example, like cheese in the U.S. markets.
11 Their competition would have to be to move product either East
12 and compete with other products, producers in the West. That
13 has been true that California has been a problem for them
14 because of lower milk supply prices and relative proximity
15 that's similar, or they have to push the product West,
16 essentially export overseas. And those, many of those products
17 markets have developed for them over time.

18 Q. So those are problems that occurred back about 15 years
19 ago, right around the time of Reform, correct?

20 A. Began about that time.

21 Q. Okay. Have you observed the production of cheese in
22 that region over the years since 2000? The trends in
23 production of cheese, I should say.

24 A. Yes. I think that they have been, and I guess, Marvin,
25 I can't say that I know exactly what they are doing this year

1 without looking at the data in comparison to just a year ago,
2 or a few years ago. But they have been producing relatively
3 more other product than cheese. Their product mix has changed.

4 Q. Since 2000, that's your testimony?

5 A. I believe that's the case. But again, I wouldn't want
6 to make a strong statement without looking at data.

7 Q. I appreciate that. Thank you. That's all I have.

8 JUDGE CLIFTON: Dr. Stephenson, when you said that it was
9 anticipated there would be problems at the borders, is that the
10 borders of the marketing orders or the -- what other borders?

11 DR. STEPHENSON: It was the borders of the marketing
12 orders. There was consolidation from, I believe it was 33 or
13 34 Federal Orders into 13 at the time, and the collection of
14 monies that were that larger pool and the distribution from us
15 in looking at model results would have said this will be a
16 problem in some border areas.

17 JUDGE CLIFTON: Mr. Vetne?

18 MR. VETNE: Beg your pardon, your Honor, I had some upside
19 down notes and tiny print I didn't observe.

20 CROSS-EXAMINATION

21 BY MR. VETNE:

22 Q. Okay. Let's see. Figure 4, on page 7, has a title
23 USDSS Model-Generated Cheese Difference in Marginal Value of
24 Milk at Cheese Plants, correct?

25 A. Correct.

1 Q. Keep the -- bear that in mind. Going back one page to
2 page 6, USDSS Model-Generated Cheese Differentials, May 1995.
3 And I just went online and got to that page and it, the figure
4 further elaborates that it is 3.5 percent milk at standard
5 solids not fat.

6 A. Correct.

7 Q. So what -- is Figure 4 also standardized milk or is it
8 milk at test?

9 A. No, it is 3.5 percent milk, not at test.

10 Q. Okay.

11 A. So we wanted to make sure that it was at least
12 comparable to what had been reported before.

13 Q. All right. And then I went back to the the 1996 paper,
14 the original U.S. Dairy Sector Simulator paper, which had a
15 cheese price surface, or actually, it wasn't a cheese price
16 surface, it was -- it was on page 81 of that. A, as in apple,
17 10, and the title there used was, Simulated Class III Price of
18 Standardized Milk at Cheese Plants.

19 Is there a difference in what is captured by simulated
20 Class III price and cheese difference marginal value of milk?
21 Are they measuring something slightly different in the two?

22 A. No. We have always struggled with how do we report
23 these values. And I did try to mention, I think at least a
24 couple of times in my testimony, that the important thing is
25 the difference between spatial values, because in the case

1 where we're trying to report differentials, we will add a fixed
2 amount to everybody, to this price surface to get something
3 that looks like a differential. And the same thing would have
4 been true for a cheese milk price at that time. I didn't
5 recall that in the document that you are referencing, but one
6 thing that we did at that point was to look at the total dollar
7 value that would have been generated by the sale of milk into
8 cheese plants, and to say, what do we need to add to the
9 spatial price differences or values to generate exactly the
10 same total value of dollars to dairy producers. And that's
11 probably the Class III value that we reported there.

12 We have since come to realize that that was difficult
13 to explain to people, and so the spatial price difference from
14 one point to another would be identical, you know, if you
15 subtracted that fixed value as we were reporting here, with the
16 zero value over in the western part of the country.

17 Q. Okay. But in 1993 and 1995, there was no element other
18 than an imputed element, in the Class III price for whey or
19 whey products, correct?

20 A. No, that's correct. And we would not have been trying
21 to do that. We would have been looking at the Basic Formula
22 Price at that point in time, and saying, you know, what would
23 the sale of the Basic Formula Price milk have totaled in dollar
24 value? What do we need to add to this price surface to equal
25 the total value in the U.S. of the Basic Formula Price sales.

1 Q. Okay. And now looking at Figure 4 on page 7, Cheese
2 Difference in Marginal Value of Milk. Am I correct in reading
3 that as you are plotting a surface looking at the value of
4 cheese and milk goes into it, but it's -- it's the cheese part
5 of the use of milk that you are plotting here, not -- the whey
6 is, the whey and whey values and costs of whey are not included
7 in Figure 4?

8 A. Well, in some sense they would be. Because what we are
9 asking is at a cheese processing location, how much would you
10 be willing to pay to have an extra hundred pounds of milk right
11 here at this location, to manufacture more product? Whey is a
12 co-product of cheese manufacturing.

13 Q. Okay. And then does, does, in effect, the model assume
14 that the cheese makers in the model have the same, process the
15 same costs for whey? All things -- is it sort of, is it an all
16 all things, all other things being equal, what are the
17 differences based on what your observed cheese values?

18 A. Yes, there are processing costs for whey in here. So
19 different types of cheese, the American-style cheese in this
20 model and the all other cheese have slightly different whey
21 yields in the model, and different components in that. So the
22 whey processing is slightly different cost as well, given the
23 different components of the whey product. And when you are
24 thinking about the, this marginal value of additional milk at a
25 cheese plant location, it is not just for that cheese market,

1 it is also to satisfy the use of whey products in the rest of
2 the country as well. So in that particular instance, there is
3 if, and I think I put that in the, in the website, one of the
4 maps that has a whey flow, a primal flow of that, there is a
5 very heavy line that's indicating whey products to export.
6 About half of our whey is exported from the country. So it
7 does favor plants, to some extent, that are close to a port.

8 Q. Okay. In the whey portion of your testimony you
9 discuss different ways of dealing with whey, and that in
10 Wisconsin it's common for cheese plants to partially dehydrate
11 the whey stream and ship it off to an aggregator who makes whey
12 products, which comes at a cost. To the extent that other
13 parts of the country, California, Idaho, Washington,
14 New England, doesn't matter, have different costs for that,
15 because whey aggregators are not present, or not present
16 locally, are those different costs for disposing of, or
17 handling whey captured in the model?

18 A. No, they aren't. In fact, John, just for
19 clarification, we would assume that whey processing is
20 occurring at these cheese plant locations anywhere that there
21 is actually whey processing that occurs in the country, so if
22 we have a cheese plant that processes product, then it is a
23 plant indicated in here that can -- can process much.

24 Now, you could receive whey from another plant to be
25 processed in final product, but typically most of our whey is

1 being chosen to be produced at plants here with this capacity.

2 Q. Okay. So model imputes to the cheese plants that are
3 in the model, the ability to convert the whey stream to a final
4 whey product?

5 A. That's likely to be the choice that the model is
6 making. If it has a choice between two plants and we don't
7 capacitate them, it would probably say it's going to cost less
8 if we just make this a big plant and it processes all the
9 cheese and the whey products here.

10 Q. Okay. And the other question that I overlooked has to
11 do with Figure 2 on page 4. The long orange lines, I need to
12 say this again to make sure I understand it, if I'm correct.
13 The long orange lines reflect distribution of finished cheese
14 products to consuming publics, correct?

15 A. Correct.

16 Q. Okay. And the way I'm looking at it, it looks like the
17 model has the cheese that's manufactured prepared in some kind
18 of commercial packaging, either consumer food service packaging
19 and distributed in that form from the cheese plants; is that
20 correct?

21 A. No, we don't put that level of refinement on this.

22 Q. Okay. We have had some discussion at this hearing
23 about plants that specialize in converting bulk cheese of
24 various kinds. Cut and wrap, shred, and bulk cheese flows from
25 all parts of the country to these converters, and then from the

1 converters to wholesale distributors, and from wholesale
2 distributors to stores, and from stores to the kitchen.

3 So does this model in any way incorporate the function
4 of those converters of bulk cheese to consumer or food service
5 cheese units?

6 A. No, it doesn't do that. It is simply saying once we
7 have processed product into a 40-pound blocks or 500-pound
8 barrels, or 640's, then we're done. We can ship those to
9 points of consumption.

10 Q. Okay. So that's something that could be built into the
11 model, but is not there yet?

12 A. It could be, absolutely. And if we had good data on
13 how much of the product was actually cut and wrapped, or
14 processed, shredded, and where those plants are located, then,
15 you know, the model would try to ship them from cheese plants
16 in the east, to cut and wrap in the Midwest, and finished
17 product back to the East Coast.

18 Q. Okay. Is that one of those real-life commercial
19 practices that would add cost to distribution that is not
20 captured by the model?

21 A. That's correct.

22 Q. Okay. Now, going back to the Pacific Northwest. At
23 the time the USDSS model produced its first results in 1996 and
24 then again, I think in 1998?

25 A. Yes.

1 Q. There were in place, there was in place in those
2 documents, a cheese value price surface, and that was discussed
3 by the Economists, and USDA had that available. And USDA chose
4 to have a one Class III price for the Federal Order system.
5 There was, at that time, by observing the model output, a
6 rational basis to have a lower Class III price in the
7 Pacific Northwest in particular, in the Federal Order system,
8 correct?

9 A. Well, we had provided a rationale through, you know,
10 the look of this price surface, yes.

11 Q. Okay. So Mr. Beshore asked you a question about hasn't
12 the Pacific Northwest suffered some competitive disadvantage
13 because of the California discount. Would it be just as
14 correct to say that California, that Pacific Northwest has
15 suffered some competitive disadvantage because the Federal
16 Premium was exported to the Northwest?

17 A. The minimum prices in the two regions were different,
18 generally lower, than, in fact, I think in all cases lower in
19 California.

20 Q. Okay. Thank you.

21 JUDGE CLIFTON: Dr. Stephenson, I'm intrigued by the fact
22 that half of the whey is exported. Are there any global prices
23 for finished product of whey that you rely on?

24 DR. STEPHENSON: We do with a different type of modeling
25 effort than this, yes. We observe values of whey both as

1 reported in Oceania, and in fact, separate countries of
2 Oceania, Australia, New Zealand, as well as the European Union.
3 So we do watch what is happening to whey prices in other areas.
4 But the U.S. is the largest single exporter of whey in the
5 world.

6 JUDGE CLIFTON: And what are the best places to look for
7 values of finished product whey that are published for U.S.
8 whey or U.S. whey exports?

9 DR. STEPHENSON: Many of the world, actually, looks at the
10 U.S. Dairy Market News that are reporting these values and
11 collecting them, but in some cases, they are collecting some of
12 these values through reported web sites now in the European
13 Union and/or Oceania.

14 JUDGE CLIFTON: And do you have any explanation for the
15 volatility in the prices of finished product whey that we have
16 heard about in this hearing from various processors, located in
17 California?

18 DR. STEPHENSON: Yeah. We -- it's a struggle to
19 understand. I think all of the reasons we see the volatility,
20 and many cases, I think people like myself that do try to keep
21 an eye on markets, imagine that these whey price volatilities,
22 and in some cases other products like nonfat dry milk, are
23 moving further than is probably needed at times to either
24 satisfy demand or to clear markets. So, in other words, the
25 price volatility seems a bit more extreme than is necessary,

1 but it happens nonetheless. The markets are moving prices to
2 very high levels and then you get demand pushed back sometimes
3 or excess product on markets. And a little bit of that goes a
4 long way toward taking products to very low prices, which we're
5 observing today.

6 JUDGE CLIFTON: Thank you. Who else has questions?
7 Mr. Vandenheuvel?

8 CROSS-EXAMINATION

9 BY MR. VANDENHEUVEL:

10 Q. Good afternoon, Dr. Stephenson. Rob Vandenheuvel,
11 Milk Producers Council. I just had one area I wanted to
12 explore a little bit.

13 In presenting Figure 1 and Figure 2 in your exhibit,
14 notwithstanding where the lines go, it is a very clear visual
15 reminder that while Class I markets could still be identified
16 as a local or regional issue, the Figure 2 shows that
17 manufactured products, in this case cheese, are very much a
18 national market that we're dealing with, it is product moving
19 all over the country. You would agree with that?

20 A. I would agree with that, yes.

21 Q. And so not looking to go down a whole long policy
22 discussion or theory of history, but would you agree that the
23 way our current Federal Order pricing regulations operate for
24 manufactured milk products, Class II, Class III, Class IV, is
25 that the practical affect is USDA sets a uniform price or the

1 same price across the country, and each of the regions within
2 that structure competes for a milk supply, and you hear about
3 over order premiums are higher in certain areas, and they
4 compete for a milk supply above the base price that applies
5 everywhere.

6 A. Yes, in general, that's the case. Yes.

7 Q. So when I look at page 9 of your testimony on the very
8 bottom, actually the last word on the page "A" and then move
9 into page 10, but I needed to catch that "A", "a better
10 solution may be to reflect the regional price variation with a
11 price surface as we do with Class I milk."

12 If we -- if USDA were to establish a differential
13 system for manufactured milk where the regulated minimum price
14 was different in different regions of the country, wouldn't
15 USDA be put in a position of actually picking winners and
16 losers amongst the United States, giving advantages to some
17 areas of the country as opposed to just letting areas compete
18 above the base price that applies everywhere?

19 A. I would hope that that weren't the case because that
20 would imply that there was no reason for premiums to exist. In
21 other words, I would assume that USDA would want to have
22 minimum prices that were below market clearing levels and allow
23 some variables for premiums in all markets. That's what's
24 traditionally been the case, but we have, you know, some
25 regions of the country where that's more difficult to express.

1 Premiums certainly aren't the same in every location.

2 Q. Wouldn't it be true that for any cheese manufacturer
3 looking to sell their product, that there's going to be a
4 certain element of local demand, and then certain element of
5 further out demand, more national markets that they seek? We
6 have heard from witnesses in this hearing that sell product
7 locally but also try to branch out into other markets for
8 growth potential?

9 A. Yes, for opportunity for sales, sure, absolutely.

10 Q. So the plants that operate within each of the regions
11 in California included, are, in essence, competing with each
12 other for markets all over the country, are they not? I mean,
13 they have an advantage on some of their local markets, but they
14 are competing with each other in other markets?

15 A. Yes.

16 Q. And so the way USDA currently has it set up, where
17 there's one price, they are competing on an equal playing
18 field. Now, it may make more sense, would you agree, maybe
19 make more sense to manufacture milk in one area? Right now it
20 appears that the Upper Midwest may be an attractive place to
21 purchase and manufacture milk into cheese, they pay higher
22 premiums than other regions, but that's a function of the
23 marketplace and their ability to pay those higher prices,
24 wouldn't you agree?

25 A. Well, it is a function of quite a variety of things,

1 including the decisions that individual producers have made on
2 the volume of milk that they are willing to produce at the
3 prevailing prices. And we take that as a given in this
4 particular model. So, you know, we look at this and say, this
5 is what producers chose to produce under the regulations that
6 existed at that point in time.

7 Q. Okay. But you would see from a macro standpoint, if
8 USDA is, I mean, they are not in -- we would agree they are not
9 in the position of trying to enhance cheese manufacturing in
10 one of the part of the country and depress cheese manufacturing
11 in another, correct? That's not their role in this system?

12 A. I don't think that you would get a witness from USDA to
13 say that's what we're trying to do, no. I think that they are
14 very fair and they put on the blindfold and hold up the scales
15 of justice when they are looking at making Federal Order
16 recommended decisions.

17 Q. But, you know, so if that's our underlying assumption,
18 isn't it, from a macroeconomic standpoint, isn't it true that
19 if you give a regulated advantage to one region of the country,
20 if you are inherently benefitting in that region and making it
21 more profitable, more, giving them more opportunities because
22 they have a lower regulated minimum price than another area
23 where you don't afford that same opportunity?

24 A. No, it's too simplistic to state that. And I won't let
25 you paint me in that particular corner. Because producers are

1 making decisions that are based on the assets that they can
2 employ to produce milk in different regions. The Southeast I
3 think has had a very difficult time over the last many years
4 because fundamentally, conditions have changed for them.
5 Higher-yielding cows simply can't produce as much milk in the
6 hot and humid climates as they could before. We're
7 experiencing shortages in that region of the country that are
8 much more severe than they used to be, and that's not because
9 prices are lower there, it's because prices are higher there,
10 and you should say don't they have an advantage? I don't think
11 they do. It's dependent on a lot of things, and not all of
12 which are captured in the model. We take those decisions as
13 given.

14 Q. You have got some experience looking at the Margin
15 Protection Program that USDA oversees through their farm
16 services agency, department or division?

17 A. Yes.

18 Q. And in that program there is, there is one milk price,
19 and one feed cost that drives whether a payment or an indemnity
20 is made under that program, and so a national program?

21 A. It is national program.

22 Q. Do you know why Congress chose and crafted -- because
23 that's a statute they wrote, they made, Congress made the
24 decision. Do you know why Congress made the decision to set
25 one, use one U.S. price and one feed calculation in calculating

1 indemnities?

2 A. I wasn't inside on the discussions, but I think that
3 they were using this as an indicator, a means of moving the
4 needle, if you will, about need for producer support during
5 points in time. And it tends to be the case, although it is
6 not perfect, that when producers are having problems, most all
7 producers are having problems in the country. 2009, as an
8 example, that it wouldn't have mattered which indicator you
9 tried to take a look at to say is this a good time or a bad
10 time in the dairy industry, it would have reflected that this
11 was a tough time in the dairy industry for almost all
12 producers.

13 Q. If you will indulge me for just a moment, because I
14 want to give this background in advance of the question I'm
15 going to ask.

16 There was a proposal put forth during the deliberations
17 of the Farm Bill, to have a regional approach to calculating
18 feed costs for the Margin Protection Program. And
19 Congressional, there was discussion at the House Agriculture
20 Committee, and we can, in fact, pull up the transcripts of the
21 House Agriculture Committee hearing that was held on this
22 issue, and a comment was made by a Congressman out of Iowa,
23 Congressman Steve King, that stated, "wouldn't having a
24 regional feed cost adjuster, regional approach, put USDA and
25 Congress in the position of advantaging one area of the country

1 having a program that triggers in earlier in one area or
2 another?" This is a national program.

3 Wouldn't there be a parallel in how USDA regulates a
4 Federal Milk Marketing Order for manufacturing milk and setting
5 a baseline without picking winners and losers? And I know you
6 don't want to get painted in that corner, but aren't there some
7 parallels here in that scenario?

8 A. I understand the direction that you are coming from on
9 this, and I think that if you were trying to take a look at the
10 Margin Protection Program, mostly, not entirely, and I would be
11 the first to say this, but mostly those boats are all rising
12 and falling on the same tides, okay? So dairy producers in one
13 part of the country are generally experiencing the same kind of
14 declining conditions or improving conditions, perhaps to
15 differing degrees, but nevertheless, as a measure of need for
16 the program it could be okay.

17 I think the Margin Protection Program may be argued as
18 to whether or not it triggers a need for me as to how much does
19 my premium cost. In other words, if I decided that from my
20 farm I needed to have protection at the \$8 level to trigger
21 when I'm actually getting into problems, that's an expensive
22 premium. Maybe another farm feels in another part of the
23 country as though they needed a \$6 level of trigger to move
24 when it needs to be there, it's a lower premium cost. So it
25 maybe about calibrating premium prices as much as anything.

1 But I understand the argument that you are making. I'm just
2 not sure I can go completely with that with a Federal Milk
3 Marketing Order, they are very different programs.

4 Q. All right. Well, thank you very much for your time and
5 for coming out today.

6 JUDGE CLIFTON: Who next has questions for Dr. Stephenson?
7 Dr. Stephenson, I see none. Is there anything you would like
8 to add before I invite you to step down?

9 DR. STEPHENSON: No, but I would thank you for your
10 patience and your good questions, and I appreciate the
11 opportunity to about talk before the group today.

12 JUDGE CLIFTON: Well, we thank you. We appreciate very
13 much what you have brought to the hearing.

14 DR. STEPHENSON: Thanks.

15 JUDGE CLIFTON: You may step down. Mr. English?

16 MR. ENGLISH: I think we're going to take a break, but I
17 just thought I would announce that one of my known unknowns has
18 become a known known, and so we're going to go to next to
19 Joe Paris testifying for Joseph Gallo Farms, but I think we
20 also need our afternoon break.

21 JUDGE CLIFTON: Good. I'm glad to know what's coming next.
22 Let's see, let's be back and ready to go at 3:30. We go off
23 record at 3:12.

24 (Whereupon, a break was taken.)

25 JUDGE CLIFTON: We're back on record at 3:33. Mr. Gallo, I

1 would invite you to come to the witness chair to my right. I'm
2 sorry, Mr. Paris. Mr. Paris of Gallo. I'm going to mark
3 Mr. Paris' statement as Exhibit 134, Exhibit 134.

4 (Thereafter, Exhibit 134, was
5 marked for identification.)

6 JUDGE CLIFTON: Mr. Paris, I'll swear you in in a seated
7 position. If you will raise your right hand, please.

8 Do you solemnly swear or affirm under penalty of
9 perjury that the evidence you will present will be the truth?

10 MR. PARIS: Yes.

11 JUDGE CLIFTON: Please state and spell your name.

12 MR. PARIS: My name is Joe Paris, J-O-E, P-A-R-I-S, just
13 like the city in France.

14 JUDGE CLIFTON: Thank you. Ms. Vulin, if you would
15 identify yourself, you may proceed.

16 MS. VULIN: Ashley Vulin for the Dairy Institute of
17 California.

18 DIRECT EXAMINATION

19 BY MS. VULIN:

20 Q. Mr. Paris, thank you for being here today. I'll ask
21 that you begin reading your statement into the record, and if
22 there's anything additional you want to add, I might interrupt
23 you throughout.

24 A. Okay.

25 My name is Joe E Paris. I'm a Dairy Consultant

1 representing Gallo Cattle Company, LP, doing business as
2 Joseph Gallo Farms. I am responsible for the milk and cream
3 into and out of Joseph Gallo Farms. I also work in the farm
4 service agency for Gallo's farming operations. I provide
5 market information and other pertinent information to the
6 senior management of Gallo on a daily basis.

7 Q. Mr. Paris, can I ask you, could you go just a little
8 bit slower for us so the court reporter can make sure to get
9 everything down?

10 A. Okay. I'll try that.

11 Q. Thank you.

12 A. Prior to September of 1998 (when I started my own
13 consulting business) I worked for National Farmers Organization
14 for 26 years. During that time, I provided testimony on behalf
15 of National Farmers at several Federal Milk Order hearings.

16 Q. Mr. Paris, what were your job titles, what were your
17 roles at National Farmers Organization?

18 A. Various roles at various times. At some hearings I was
19 actually a Regional Director in the area, at other times I was
20 an Area Director, and there were times when I was Director of
21 Operations for the organization.

22 Q. And what different job responsibilities did you have
23 during your time at National Farmers Organization?

24 A. Building our dairy program, managing the staff. I
25 started out as a fieldman in South Dakota and Nebraska, and

1 then worked in Missouri, Kansas City, and Oklahoma, became a
2 Regional Director there. Then I went to Michigan, spent four
3 years in Michigan as a Regional Director; went to Ohio, spent
4 four years in Ohio as a Regional Director; and then went to
5 work in Pennsylvania and New York and some of the Northeast
6 New England states. And while I was there, in 1988 they
7 appointed me as Eastern Operations Director which covered from
8 the State of Wisconsin through Maine.

9 Q. Wow, so you have had a pretty comprehensive dairy
10 history.

11 A. In '91 I moved to California, that's where I have
12 stayed.

13 Q. Thank you. I'll ask that you continue.

14 A. If I can find my place.

15 Q. After I moved.

16 A. After I moved to California in '91, I have not been
17 involved in any Federal Order hearings, but have testified in
18 several State Order hearings.

19 Q. Any Federal Milk Order hearings?

20 A. No.

21 Q. Okay.

22 A. I don't think, not since '91.

23 Joseph Gallo Farms is located at 10561 West Highway 140
24 in Atwater, California. At this location we have the Gallo
25 Cottonwood Dairy and the Gallo Cheese Plant, as well as Gallo

1 Global Nutrition, a whey processing plant. Two miles east of
2 the Gallo cheese plant is the Gallo Santa Rita Dairy. Between
3 the two dairies, Gallo milks approximately 8,000 cows. We farm
4 several thousand acres to provide feed for our milk cows.

5 Q. And I'm sure someone might ask this later, how many
6 employees do you have at Joseph Gallo Farms?

7 A. It certainly varies seasonally because the amount of
8 farming we do, but I would guess about 300, and a little more
9 in the season when we're farming.

10 Q. Thank you. You may continue.

11 A. Gallo supports the Dairy Institute's alternative
12 proposal at this hearing. Gallo is opposed to the Cooperative
13 proposal as written. We are taking no stand on other proposals
14 at this hearing.

15 Joseph E. Gallo started farming in 1946. In 1983, he
16 hired a Wisconsin cheese maker to help him realize his
17 childhood dream to make and market cheese. He and the cheese
18 maker built the Gallo cheese plant. Since that time, the plant
19 has been improved and expanded several times. The cheese plant
20 plans to process close to five hundred million pounds of milk
21 this year into various cheese varieties, including cheddars,
22 Monterey Jack, Mozzarella blocks, and pasta filata. At this
23 time, much of the milk that Gallo processes is bought from
24 outside suppliers. We concentrate whey from our own plant and
25 are a market for whey protein concentrate (WPC) from other

1 small plants in the area. The WPC is processed and dried into
2 Whey Protein Isolate at the Gallo Global Nutrition plant, part
3 of the Gallo complex.

4 Domestically, we sell packaged cheese under the brand
5 of Joseph Farms Cheese. Most of this cheese is found in
6 grocery chains in California or Wal-Mart and Costco. We also
7 export cheese into Mexico and other countries, both branded and
8 unbranded. Some of the cheese is sold as commercial blocks or
9 food service.

10 Gallo has always tried to invest in ways to not only
11 improve our efficiency, but in a way to protect our
12 environment. The Gallo methane digester provides electricity
13 to operate the plant. Waste water from the plant is used to
14 flush the Cottonwood Dairy lanes to a separator where solids
15 are taken out before the liquid goes into the digester. Solids
16 are then composted and used to fertilize land. The system cost
17 millions of dollars to build and maintain. Gallo Global
18 Protein is another large investment where we process WPC from
19 our cheese plant and from a few other small cheese plants.

20 If Gallo had been required to pay the Federal Order
21 Marketing Class III price for the last several years, none of
22 these improvements could have taken place. Gallo a small plant
23 when compared with national companies in California, and would
24 not have been able to generate enough profit to invest in these
25 long-term sustainable projects. One thing I will say, Gallo

1 has won many awards from state to national under
2 sustainability. Without profits, there is no investment. From
3 January 2014 through September 2015 we believe that Gallo's
4 cost per pound of cheese, cost per pound of cheese would be
5 22.37 cents --

6 JUDGE CLIFTON: Wait now, you left out some words. Start
7 that sentence again, would you, please?

8 MR. PARIS: From January 14 through September 15, we
9 believe that Gallo's cost per -- and I don't have it in -- per
10 pound of cheese is not written in here. I'm adding per pound
11 of cheese to my testimony. Would be 22.37 cents --

12 JUDGE CLIFTON: Let's see, he's got a different version
13 than mine.

14 MR. PARIS: Yes, I did not add those words in there, I add
15 them here now.

16 But, I said by an average of 22.3 cents. I see right
17 here. I believe Gallo's cost per pound of cheese would have
18 increased under the Cooperatives' proposal by an average of
19 22.3 cents per pound.

20 JUDGE CLIFTON: That's 22.37 cents?

21 MR. PARIS: Yes.

22 JUDGE CLIFTON: Thank you.

23 MR. PARIS: This kind of cost increase would make us
24 uncompetitive in every market we serve, and possibly eliminate
25 our sales in Mexico.

1 As mentioned earlier, Gallo milks 8,000 cows in two
2 facilities. We certainly understand the plight of dairymen in
3 the State of California. Both our dairy producers and cheese
4 plant operators, we are at the mercy of the marketplace.

5 JUDGE CLIFTON: Now, would you read that sentence again,
6 please?

7 MR. PARIS: Both as dairy producers and cheese plant
8 operators, we are at the mercy of the marketplace. Volatility
9 can be the enemy of both producer and processors. Long-term
10 planning and investment is needed in order to grow both the
11 producer segment and the processor segment of the dairy
12 industry. If the cooperatives' proposal is adopted as written,
13 it is our opinion that the cheese sector in California will
14 stagnate almost immediately. Some medium and small plants will
15 no longer be able to sustain their processing plants.
16 Producers will find themselves with fewer markets, the
17 California market will find itself at a pre-1985 position of
18 being mostly a butter powder industry.

19 How would we respond at Joseph Gallo Farms if the
20 Cooperatives' Federal Milk Order proposal is adopted? One
21 scenario would be to eliminate all outside suppliers of milk
22 and reduce our cheese sales to only our Joseph Farms packaged
23 cheese. We might need to add a few more cows and take
24 advantage of the higher milk prices. Our branded product
25 prices would have to be increased in order to main overall

1 profitability.

2 JUDGE CLIFTON: In order to maintain?

3 MR. PARIS: In order to -- our branded product prices would
4 have to be increased in order to maintain overall
5 profitability. We could also look at diversifying our
6 operation by planting more permanent crops. At the very least,
7 we would have to eliminate any premiums or handling charge we
8 currently pay our suppliers.

9 BY MS. VULIN:

10 Q. So currently you pay at least some of your suppliers
11 premiums?

12 A. Yes.

13 Q. And you think possibly one of the ways that you would
14 have to deal with an increase in prices is to further grow your
15 processing segment?

16 A. Further grow our dairy farms.

17 Q. Your producer?

18 A. And take advantage of the higher price there, and
19 eliminate the suppliers that we have now.

20 Q. To take advantage of the price, you'd need to both be a
21 producer and a processor?

22 A. Right. And we'd probably have to raise our cheese
23 prices, cut out anything but our branded product.

24 Q. Thank you. You may continue.

25 A. We could look also at diversifying -- I read that.

1 At the very least, we would have to eliminate any
2 premiums or handling charges we currently pay our suppliers.

3 Producers have a tendency to look at the Midwest or the
4 East Coast and feel that they are being deprived of a fair
5 price. These producers serve an entirely different market than
6 what we have in California. Because of their location, these
7 areas serve the vast population that runs from the Midwest to
8 the East Coast, and from Maine to Florida. Because of
9 transportation costs, they can demand higher prices for their
10 products. Much of the California's production services not
11 only the West Coast population, but also Mexico and the export
12 market. These export markets, including Mexico, cannot pay the
13 prices that would be needed to offset the increased cost of the
14 Federal Milk Marketing Order Class III price. Even in emerging
15 markets, incomes will not allow any chance for profit or
16 growth. We know that when the cheese prices are over \$2 per
17 pound, both domestic and export sales are reduced. What we
18 hear about the growth in middle class in many of the emerging
19 countries to which we export cheese does not mean that they
20 have the same ability to purchase as the middle class in this
21 country.

22 Q. So being located in California, you have to pay higher
23 transportation costs for your cheese than -- than producers
24 located in the Midwest or the East Coast?

25 A. If we wanted to go to those markets, it would cost us,

1 it would be impossible. It would be too high.

2 Q. So one of the things you have done is looked at markets
3 outside the United States, like Mexico?

4 A. Yes.

5 Q. But those markets tend to be much more price sensitive?

6 A. Yes, they are.

7 Q. And it's just a different --

8 A. And we have exported some to Japan and other countries.
9 In the Federal Order marketing area, plants are allowed to
10 depool and there's no minimum pricing laws that require a
11 minimum payment to depool milk. The Cooperatives' proposal
12 does not allow depooling in the California Milk Marketing
13 Order, unlike other Federal Milk Marketing Orders.

14 In fact, that fact alone could cause disorderly
15 marketing conditions for cheese plants in California. Due to
16 large increases in the milk production in other parts of the
17 country, it has been reported that milk has been purchased for
18 as much as \$7 per hundredweight below the minimum regulated
19 price in this last spring -- in the spring and summer of 2015.
20 We have heard also reports of many loads of milk being dumped
21 in this same period. Today in California it is unlawful to pay
22 less than the regulated price unless milk does not meet the
23 Grade A standards of quality and the milk is degraded. Many of
24 the plants in the Upper Midwest have much lower overhead costs
25 due to California's regulations that have nothing to do with

1 milk. Many of the plants are medium to small and process
2 specialty cheeses. Some are able to buy manufacturing grade
3 milk at a reduced cost on a regular basis. In the last several
4 years we have seen large cooperative cheese plants close in
5 California due to losses -- closed due to losses from prices
6 required under the current California state pricing system.
7 The Cooperatives' proposal would be greatly increase these
8 costs. Gallo supports the Dairy Institute's proposal that
9 allows depooling in California.

10 Joseph Gallo Farms is opposed to the Cooperatives'
11 proposal as written. Some plants, for some plants it would
12 mean closure. For others it might mean a complete change in
13 the way they do business, including the amount of milk they
14 could purchase. I know the cheese plants that have planned to
15 add -- I know of cheese plants that have planned to add
16 additional cheese making equipment or whey processing
17 equipment, that would not be able to meet the plan due to
18 dramatically increased milk costs. The cost of raw milk in the
19 cheese plant can be 95 percent of its total cost. Areas that
20 we compete with the cheese sales, such as Idaho and Utah, are
21 not priced regulated under any state or Federal Order.

22 We support the principles of the Dairy Institute's
23 proposal, in particular the concepts of moving the whey pricing
24 from dry whey to whey protein concentrate, a much more
25 market-oriented price. It is our understanding that there is

1 only one plant in California currently drying whey. Most whey
2 product pricing is related to the WC price, rather than the dry
3 whey market.

4 Q. The WPC price?

5 A. Yes.

6 Q. Thank you.

7 A. Most whey product pricing is related to WPC price
8 rather than the dry whey market.

9 Gallo is concerned that the implementation of a Federal
10 Milk Order in California could cost the closure of small to
11 medium sized cheese plants, including Gallo's. This would
12 result in less processing capacity in the state and more
13 producer milk seeking a market.

14 Thank you for the opportunity to testify on behalf of
15 Joseph Gallo Farms. And this concludes my testimony.

16 Q. Thank you, Mr. Paris. I think I neglected at the
17 beginning of your testimony to ask that be labeled as
18 Exhibit 134.

19 JUDGE CLIFTON: Yes, it has been. Thank you.

20 MS. VULIN: Thank you, your Honor.

21 JUDGE CLIFTON: And I would like just, with Mr. Paris'
22 permission to add two words. On page 2, the last full
23 paragraph, the top line, the way, way you read that, Mr. Paris,
24 you inserted a "they" and I think that belongs in that printed
25 line. Would you read the sentence again for me?

1 MR. PARIS: This is on the last paragraph?

2 JUDGE CLIFTON: It's the last full paragraph that starts
3 with the word producers.

4 MS. VULIN: This is the second page of the printed
5 testimony, so actually third piece of paper.

6 MR. PARIS: Okay.

7 JUDGE CLIFTON: Oh, yeah, and I guess it is not the last
8 full paragraph, it is the next to the last.

9 MR. PARIS: So you want me to read that line again?

10 JUDGE CLIFTON: Yes, please.

11 MR. PARIS: Producers have a tendency to look at the
12 Midwest or the East Coast and feel that -- I should insert
13 they -- are being deprived of a fair price.

14 JUDGE CLIFTON: All right. And Ms. Frisius, are you there?
15 Good. Thank you. So we have inserted that word "they", and
16 then on the next page, at the end of that first paragraph, read
17 that sentence for me, if you will. It starts with the word
18 Gallo.

19 MR. PARIS: Gallo supports the Dairy Institute's proposal
20 that allows depooling in California.

21 JUDGE CLIFTON: Right. So we'll just insert the word "in".

22 MR. PARIS: I knew I should have had our Secretary
23 double-check this, but I didn't have time.

24 JUDGE CLIFTON: Well, you actually did beautifully. And
25 there were a couple of other small ones, but I don't think they

1 matter, so those are the only two that I wanted to make sure we
2 had those words.

3 MS. VULIN: Mr. Paris, these aren't our first edits, and
4 I'm sure they won't be our last. At this time I would like to
5 move the admission of Exhibit 134.

6 JUDGE CLIFTON: Does anyone wish to question Mr. Paris
7 before determining whether you object? No one. Are there any
8 objections to the admission into evidence of Exhibit 134?
9 There are none. Exhibit 134 is admitted into evidence.

10 (Thereafter, Exhibit 134, was
11 received into evidence.)

12 MS. VULIN: Mr. Paris, is there anything else you would
13 like to add in addition to what you have shared with us to your
14 testimony today?

15 MR. PARIS: Not at this time.

16 MS. VULIN: Well, thank you very much for being here, I
17 have no further questions.

18 JUDGE CLIFTON: Thank you, Ms. Vulin. Who would like to
19 ask additional questions of Mr. Paris? Mr. Miltner.

20 CROSS-EXAMINATION

21 BY #1:

22 Q. Good afternoon, Mr. Paris.

23 A. Good afternoon.

24 Q. Ryan Miltner, counsel for Select Milk Producers.

25 I'm looking at what is the, it's the third page of your

1 statement. It is actually the second page with text on it.

2 It's starts, the first words are, "if Gallo had been required
3 to pay," do you see where I'm looking at there?

4 A. Yes.

5 Q. Okay. So in that paragraph you stated that from
6 January 2014 through September 2015, cost per cheese for Gallo
7 would be 22.37 cents higher under the Cooperative proposal.

8 A. That is correct.

9 Q. Okay. Can you tell us how you arrived at that figure?

10 A. We took the pricing during those months of what the
11 Federal Order Class III price would be and what the California
12 Class 4b price would be based on components, and run a
13 spreadsheet. And then we took the amount of cheese, looked at
14 the cost between the two, took an amount of cheese that we
15 processed in that time, and used it to run a cost per pound of
16 cheese, and the average was 22.37 cents for that period of
17 time, January 2014 through September 30th of 2015.

18 Q. And are you familiar with the changes to the
19 California 4b price formula?

20 A. Certainly.

21 Q. That were recently implemented?

22 A. Right.

23 Q. Do you have any thoughts as to how those changes would
24 affect this calculation that you included in your testimony?

25 A. We just simply ran what those actual prices were and we

1 didn't go beyond that where they might be. Now, we do notice
2 though the average is 22.3 cents, it ranged from 37 cents to 10
3 cents depending on the month. Part of that is because of the
4 whey price, where the whey price was at. And possibly the
5 difference in the last few months that we have seen a change in
6 the California pricing.

7 Q. And I think that if you went back far enough you might
8 even find some situations where there would actually be a
9 positive benefit to being priced under the Federal Order versus
10 a California Order.

11 A. I didn't run, I didn't go back any farther than that,
12 and, you know, I would be surprised if it was, except for maybe
13 a month or two. There may be months when that was true.

14 Q. Do you have any, have you done any analysis to
15 determine whether the recent changes to the 4b price formula
16 will cause hardship for Gallo?

17 A. With the whey price where it is, it has not caused us a
18 lot of heartburn. If the whey factor was where it was, it
19 would be a lot of heartburn. It would have had, it would be
20 very costly to us.

21 Q. What do you mean by if the whey factor were where it
22 was?

23 A. Well, the price of whey has gone down, you know, that's
24 probably all, in the hearing record already. It's dropped
25 tremendously and down about 22 and a half cents, something like

1 that now. And so with it that low in the new pricing formula
2 in the 4b price, it is not a lot of, not a lot of money. But
3 if it was back up at 80 cents where it was in 2009 or 2012
4 whenever it was there, it would be impossible make any money.
5 In fact, at that time, under the old formula that we had, Gallo
6 found that their costs were \$2.00 a hundredweight over what
7 they'd be getting out of their products.

8 Q. So what you are focusing on there is more the price of
9 the whey rather than the mechanism with in the formula itself?

10 A. I think the price of the whey has been the big factor
11 in this change, although there is some, based on the change in
12 the California 4b price temporarily for one year.

13 Q. Sure. The cows that Gallo owns, and those farms, do
14 they own any quota?

15 A. No.

16 Q. You mention in your statement that you, that one of the
17 possible responses of Gallo to a Federal Order would be
18 eliminating premiums or handling charges paid to your
19 suppliers.

20 A. That's correct.

21 Q. So I can infer from that that you currently pay
22 premiums to your suppliers; is that right?

23 A. That's correct.

24 Q. Has that been the case historically as well?

25 A. Yes.

1 Q. Do you change your premiums in response to changes in
2 the California 4b formulas?

3 A. We haven't that much at this point, but we're looking
4 at some new pricing formulas which we would probably do that.
5 So far, our contracted prices are based off quality premiums, a
6 special premium that we pay for special milk into the plant,
7 and some protein premium.

8 Q. Are you willing to share with us, for the record, what
9 the average premium paid to your producers is?

10 A. Our outside suppliers?

11 Q. Yes, sir.

12 A. I didn't ask permission to share that, but it is in
13 excess of 75 cents on the average per hundredweight.

14 Q. Thank you. I don't want you to get in hawk with
15 Mr. Gallo or anything.

16 A. Believe me, I won't.

17 Q. Very good. You also mentioned that you have exported,
18 or your company has exported cheese as far as Japan?

19 A. Uh-huh.

20 Q. Which I think is pretty unique for cheese makers.

21 Exports are more and more important, but Japan is one country I
22 don't here frequently mentioned as an outlet for U.S. cheese.
23 Is that type of export sale pretty typical for Gallo?

24 A. We have exported to Japan, we have exported to Korea.
25 We have, there's other Asian countries we have had, and those

1 are basically blocks that we export, and they are there at
2 times and at times they are not there. It's -- it's not steady
3 business.

4 Q. Okay. I would be interested in your opinion as to why
5 that business is not steady for you.

6 A. We're actually a plant that is designed to do our own
7 brand. We cannot compete with large block makers. There has
8 to be strong demand, and when there's times of strong demand,
9 we are able to export some and actually make some profit off
10 it. But on a day-to-day basis, it is hard to do. We do supply
11 blocks to some domestic people that buy it, cut it and wrap it
12 themselves, and that's another, food service and things like
13 that. But export sales, when there's great demand out there,
14 we have taken advantage of some of that and exported blocks.

15 Q. Does the price variation in the 4b price in California
16 contribute in any way to your ability or inability to regularly
17 or consistently supply an export market?

18 A. I think it has more to do with the demand for the
19 export market than it does the 4b price.

20 Q. Okay. Gallo Global Protein, you testified that it
21 produces WPC. What types of whey protein concentrate does it
22 produce?

23 A. It processes WPC into WPI 90.

24 Q. So describe for us, I guess, the process how you take
25 whey from your cheese making operations and get to WPI?

1 A. It goes through an ultra-filtration system, about three
2 different steps. It is then dried into WPI. We have permeate
3 that comes off of it that we do nothing with, except, I think
4 they may sell a little of it sometimes, but most of it is used
5 in cattle feed. It's not really profitable.

6 Q. So the whey from the cheese plant becomes filtered and
7 concentrated into WPC, then it moves to your plant where you
8 further process it into WPI 90?

9 A. The whey from the plant goes to the new Gallo nutrition
10 protein, which is 20 feet away.

11 Q. Okay.

12 A. We also buy some WPC from other people. We take our
13 whey and what WPC we buy, and it is all runs through the
14 filters in the Gallo plant. Now, I'm not the operator of the
15 plant, and I do not understand all the technical parts of that.
16 But I know that when we're done, we have WPI, and that's what
17 we sell. We do have another product that comes off of that
18 which is a little bit of the protein that's left, and some of
19 the fat that's left, we call Pro Cream, and most of that is
20 sold for animal feed.

21 Q. What does Gallo Cheese do with its whey cream?

22 A. That's where we get the Pro Cream.

23 Q. Okay.

24 A. It goes right into the mix. We don't skim the whey
25 cream at all. I guess technically it goes for animal feed.

1 Q. Your Mozzarella blocks and pasta filata cheese, do
2 those tend to be high moisture cheeses, and I guess greater
3 than 50 percent. Someone's asked me what I think is high
4 moisture.

5 A. Honestly, I'm not sure. I'm not a cheese maker,
6 either.

7 Q. Okay.

8 A. I would say they might be a little lower, I'm not sure.

9 Q. Okay. All right. Well, I thank you for your answers.
10 I don't have anything further, your Honor.

11 JUDGE CLIFTON: Thank you. Mr. Paris help me understand
12 where Atwater, California is. What county is it located in?

13 MR. PARIS: It's located in Merced County. It is,
14 actually, the town's about five miles north of Merced. Our
15 plant is ten miles west of Merced, but it is in the Atwater Zip
16 code. And Livingston is about another ten miles the other way,
17 so we're kind of the center of the valley there.

18 JUDGE CLIFTON: All right. And when did you start
19 consulting with Gallo Farms?

20 MR. PARIS: October 1998.

21 JUDGE CLIFTON: All right. And that's just right after you
22 started your consulting business?

23 MR. PARIS: Yes. You don't want me to tell the whole
24 story, but yes, that is correct.

25 JUDGE CLIFTON: I bet I --

1 MR. PARIS: I had told Mr. Gallo I was thinking about that
2 and in July, and I was going to see somebody else that had some
3 interesting, had some interested me to do something, and Mike
4 said, "When can you come and see me?" I said, "How about
5 Monday?" And I started on Tuesday.

6 JUDGE CLIFTON: I love that story. Now, do you consult for
7 all of these entities, the farms, the cheese plant, the
8 dairies, and the Global Nutrition business?

9 MR. PARIS: I don't have really anything to do with the
10 Global Nutrition business. I handle milk coming in, coming
11 out, whatever milk we buy I work with them on the contracts and
12 those kind of things. The only other aspect that I do is Gallo
13 Farming, where I handle all the reports that need to go to the
14 farm service agency. I do not deal with the NRSC, there's
15 other people that do that. And I provide Mike Gallo and the
16 other senior managers marketing information on a daily basis.

17 JUDGE CLIFTON: And the initials you used were the Natural
18 Resources Conservation Service?

19 MR. PARIS: Yes.

20 JUDGE CLIFTON: And that's a USDA entity?

21 MR. PARIS: Yes.

22 JUDGE CLIFTON: All right. Do you help set the prices at
23 which your products will be sold?

24 MR. PARIS: Are you talking about cheese products?

25 JUDGE CLIFTON: Let's start with that, yes.

1 MR. PARIS: No.

2 JUDGE CLIFTON: What other products do you sell besides the
3 cheese and the whey? Do you sell any fluid milk?

4 MR. PARIS: A little bit of olive oil.

5 JUDGE CLIFTON: Olive oil?

6 MR. PARIS: Small amount. We will be selling almonds in
7 the near future.

8 JUDGE CLIFTON: When you mentioned that you have 300
9 employees, did that include all of the different operations you
10 have described in your testimony?

11 MR. PARIS: Yes, that would be the whole Gallo complex.
12 And in the times that we farm there's probably another 150 to
13 200 farm workers.

14 JUDGE CLIFTON: Who next has questions for Mr. Paris?
15 Mr. Vetne?

16 MR. PARIS: Been a long time since we have been in this
17 position, isn't it, John?

18 CROSS-EXAMINATION

19 BY MR. VETNE:

20 Q. We are in the same position relative to each other that
21 we have been in the past.

22 A. Absolutely.

23 JUDGE CLIFTON: And your name, sir?

24 MR. VETNE: John Vetne, representative for Hilmar Cheese
25 Company.

1 BY MR. VETNE:

2 Q. Mr. Paris, I have been an observer at a distance of the
3 growth of Gallo Cattle Company's cheese making business.

4 A. Uh-huh.

5 Q. My recollection is that when Joseph Gallo started out,
6 he started out making cheese only from his own cows.

7 A. Uh-huh.

8 Q. The milk of his own cows, and then gradually grew to
9 receive milk from other sources.

10 A. Uh-huh.

11 Q. Were you there during that time when he was doing it
12 just from his own cows?

13 A. I know of that time, but I didn't come until later on.
14 When I first started dealing with Gallo Farms, I was working
15 with National Farmers Organization. And there was another
16 small cooperative that was selling milk to them, and then they
17 bought some from National Farmers, a small quantity to begin
18 with.

19 Q. Okay.

20 A. And that was when I was working for National Farmers,
21 that was my introduction to Gallo Farms.

22 Q. Okay. But during the, during the course of the 17
23 years that you worked there, you gained some understanding of
24 history of Gallo as you indicated in your testimony?

25 A. Yes.

1 Q. Do you have awareness of when Gallo started and was
2 making cheese exclusively from milk of its own enterprise cows,
3 whether Gallo was required to participate in the California
4 pool?

5 A. They were not in the California pool.

6 Q. They were operating as a nonpool plant?

7 A. Operating as a nonpool plant.

8 Q. Okay. And at some point did that change?

9 A. Yes.

10 Q. When did that change?

11 A. About the second year I worked for them.

12 Q. And what was the, what event occasioned the change?

13 A. I was going down the road and thinking about certain
14 things, and all of a sudden it popped into mind, why aren't we
15 pooled? Because I saw there was an advantage there and nobody
16 else had ever looked at that. And so I went to Mike Gallo and
17 we went and met with the Dairy Marketing Division and the Milk
18 Pooling Division at the same time, and asked them what steps we
19 had to take in order to be part of the pool. And they told us,
20 and sent us a letter requesting it on a certain date, and you
21 are a member of the pool. So that's what we did.

22 Q. So prior to that time, Gallo had an option to be in
23 California a nonpool plant?

24 A. Yes. They have that option today.

25 Q. And they have that option today. Is that an election

1 that can be made month to month?

2 A. Once a year.

3 Q. Once a year?

4 A. We currently -- we currently are a nonpool plant as of
5 July 1. Prior to that, we were a pool plant for a couple
6 years.

7 Q. Okay. Is the milk that's being received by Gallo
8 pooled by other entities?

9 A. Yes.

10 Q. Does that include the milk of Gallo's own farms being
11 pooled through another entity?

12 A. No.

13 Q. Okay. So some of your -- some of Gallo's milk is
14 pooled milk some of it is not pooled milk?

15 A. Correct. We buy milk from cooperatives that's pool
16 milk.

17 Q. Okay. And for the milk that is purchased, CDFR
18 regulates the price.

19 A. Yes.

20 Q. Okay. Is the -- is the farm a separate legal entity
21 from the cheese plant?

22 A. No, they are both owned by Gallo Cattle Company.

23 Q. Okay. Good. Thank you very much.

24 JUDGE CLIFTON: Who next has questions for Mr. Paris?
25 Ms. Oliver Thompson.

1 CROSS-EXAMINATION

2 BY MS. OLIVER THOMPSON:

3 Q. Megan Oliver Thompson.

4 Good afternoon, Mr. Paris.

5 A. Good afternoon.

6 Q. I'm one of the attorneys representing the dairy
7 cooperatives in this matter.

8 A. Okay.

9 Q. So I just want to be clear on timing. Mr. Gallo
10 started his dairy farms in 1946; is that right?

11 A. Yes.

12 Q. Okay. And then it was 1983 that he started the cheese
13 business?

14 A. Yes.

15 Q. You mentioned in your --

16 A. He started farming in '46 but he didn't start dairy
17 business of raising cows until later on. That was probably
18 '78. The cheese plant was built in '83. And one of the
19 reasons why he built the cheese plant is the cooperatives
20 wouldn't take his milk and he was shipping it to Nebraska. And
21 so he decided it would be much more profitable to build his own
22 cheese plant.

23 Q. Okay. Thank you. That's exactly the clarification I
24 was looking for. So 1978 is when he started the dairy?

25 A. I think that's about, I can't speak to that exactly,

1 but I think it was '78. He was raising heifers and selling
2 them and he decided to start milking his own cows. I think
3 that was in '78. The cheese plant was built in '83.

4 Q. Okay. You mention in your testimony a number of
5 different ways in which Gallo has invested in its business to
6 try to improve efficiency and I just wanted to walk through
7 each of those and ask you when those were put in place.

8 A. Okay.

9 Q. First you mentioned the Gallo methane digester?

10 A. Yes.

11 Q. Okay. When was that?

12 A. I think that was 2006.

13 Q. Okay. And then you talk about a waste water processing
14 system. When was that?

15 A. Well, that -- it's, there's -- there's been changes
16 over time, but basically that started not long after the
17 digester was put in. You want me to walk through that system?

18 Q. I don't think so.

19 A. Okay.

20 Q. I'm more looking for kind of the timeframe of when the
21 business was able to put these operations into place.

22 A. Okay.

23 Q. But -- so you are saying that that part of the system
24 was put into place after, sometime after 2006 when the
25 digester --

1 A. Yes, and it's been improved over the years. Things
2 have changed over the years. It's been a work in progress, I
3 guess you'd say.

4 Q. Thank you. And then the whey processing facility, when
5 was that put into place?

6 A. I don't know the exact time, but I think it was around
7 2010, 2011.

8 Q. Okay. So all of the improvements you talked about in
9 your testimony were instituted within the last ten years; is
10 that right?

11 A. Yes, those two particular ones, yes.

12 Q. Okay. Now, today, Gallo does uses both its own milk
13 and milk purchased from other suppliers to process cheese as
14 you testified?

15 A. Yes.

16 Q. Does it use all of its own milk in the cheese
17 processing?

18 A. Yes.

19 Q. Okay. And can you say what percentage is milk from
20 your own farm as opposed to milk bought from others?

21 A. No.

22 Q. Okay. And you mentioned that you do buy co-op milk.
23 Do you buy milk from any independents or --

24 A. No, we just buy co-op milk at this time.

25 Q. Okay. In terms of the cheeses that are produced by

1 Gallo, can you tell me what percent of your production is
2 attributed to each type of cheese?

3 A. No, I do not have those numbers.

4 Q. Okay. And can you tell me what are the yields for each
5 type of cheese?

6 A. I do not have those numbers.

7 Q. You have talked about the type of whey that is
8 processed. Is this WPI 90 the only final whey product that
9 Gallo produces?

10 A. Well, that plus what we call Pro Cream, which is -- and
11 then you have got permeate that comes off the system.

12 Q. Okay.

13 A. Permeate is a lot of lactose. It makes a good dressing
14 for cattle feed, and you know, someday they may get into where
15 they are doing something with it, but not at this point.

16 Q. Okay. And where does Gallo sell its WPI 90? In what
17 market?

18 A. I don't know where they sell all of it. It goes
19 through some people. They have been, I don't know where they
20 sell it.

21 Q. Do you know if it is in-state?

22 A. Domestically, although some of it may be exported.

23 Q. Okay. And domestic throughout the United States
24 potentially?

25 A. I think so.

1 Q. Okay. Do you know how it's priced?

2 A. No.

3 Q. You testified that you are processing WPC from your own
4 plant and you also purchase it from others. I kind of want to
5 get at the reason for purchasing it from others. Is that to
6 increase profitability?

7 A. That's the point, increase the amount of flow you have
8 got going through the plant, try to maximize the flow going
9 through the plant because that's when it is going to run its
10 most efficient. We don't, at this current time we're not
11 producing enough of our own whey to take up all the capacity we
12 have and there are a few other plants around that have that,
13 that WPC that we buy from them.

14 Q. Okay. So by buying WPC from others, you are kind of
15 defraying some of the costs by filling the capacity and also
16 having more to sell in the end?

17 A. Trying to run it efficiently.

18 Q. Yep. I think you said earlier, if I remember
19 correctly, that that part of your business is not highly
20 profitable, but it is indeed profitable; is that right?

21 A. That I said what?

22 Q. I think you said it is not highly profitable?

23 A. The Global Nutrition?

24 Q. Yes.

25 A. No, not now.

1 Q. Okay. But is it indeed profitable?

2 A. I believe that it's profitable, although there have
3 been times when it was not profitable. And if we weren't
4 buying some of it, it might not be profitable. If we rely just
5 on our own whey.

6 Q. Okay.

7 A. It's those last little bits that makes it profitable,
8 you know. Even with the cheese plants, the last two or three
9 vats that makes it profitable.

10 Q. So you have adjusted in order to make it a profitable
11 business?

12 A. We are attempting to do that, yes.

13 Q. I understand Gallo sells cheese domestically and also
14 exports it. Are you able to say what percentage is sold
15 domestically as opposed to outside the country?

16 A. No.

17 Q. Okay.

18 A. I can say the bulk of it is domestic.

19 Q. Okay. You also mentioned that you are going to be
20 selling almonds soon?

21 A. Yes.

22 Q. How many acres of almond trees are you growing?

23 A. I think we planted 1,400 acres. It is called
24 diversification.

25 Q. We have heard about that here.

1 A. Uh-huh.

2 Q. And how long ago did you do that?

3 A. Last year.

4 Q. Okay.

5 A. And this year. We had, the oldest trees we got is one
6 year old.

7 Q. Okay. On the third page of the Exhibit 134, I'm going
8 to direct you again to a sentence that Mr. Miltner referenced
9 in his questions in the first paragraph, where you say that
10 "from January 2014 through September 2015, we believe that
11 Gallo's cost for pound of cheese would have increased under the
12 cooperatives' proposal by an average of 22.37 cents."

13 A. Yes.

14 Q. Why did you choose that time period?

15 A. Quite honestly, I wasn't sure I was going to testify in
16 this hearing until just in the last few days because of some
17 health issues and some other issues. And so I, when I looked
18 at this, I didn't have time to go back and dig everything up,
19 so I went back to January of 2014 and ran through
20 September 2015.

21 Q. Okay.

22 A. That's the reason I took that time period.

23 Q. Okay. So it was really just a matter of convenience
24 and timing and all of that, there wasn't some conscious
25 decision that you weren't going to go back farther in time?

1 A. That's correct.

2 Q. Okay. Now I want to direct you to the last page of
3 your testimony. The first paragraph where you talk about
4 depooling. Have you done any studies regarding the benefit of
5 depooling, you know, related to this particular testimony in
6 Federal Order system on anything more than a, you know, spot
7 basis?

8 A. No, I have not done any in-depth studies on it. I
9 figured a lot of other people probably testifying here would do
10 that and there would be a lot of information there on that.

11 I could probably tell you that I worked in many Federal
12 Orders over the years prior to the consolidation, and we have,
13 we did a lot of pooling and we did a lot of depooling. I can
14 tell you that in 2003 we pooled a lot of milk from California
15 out into certain Federal Orders until they decided to plug
16 those holes, and haven't done any since. But that was a lot of
17 fun, and profitable.

18 But we know in California, and Gallo has probably been
19 the only plant in California that, over the years, have been in
20 the pool at times and been out of the pool at times.

21 Q. Okay. So you're basing your, the benefits of depooling
22 on your experience here in the California, your ability to
23 depool on an annual basis?

24 A. Yes, at times it is profitable, at times it is
25 profitable to be in the pool. That's the same way it is done

1 in other Federal Orders. Sometimes it is profitable to have
2 that milk in the pool, sometimes it is profitable to depool it.

3 Q. And have you looked at all at what the average cost of
4 milk is to Federal Order plants?

5 A. Not recently.

6 Q. In that same paragraph toward the end you say "in the
7 last several years we have seen large cooperative cheese plants
8 close due to the losses from the prices required under our
9 current California state pricing system."

10 A. Uh-huh.

11 Q. What's your basis for that statement?

12 A. Well, there was a plant down in Corona that closed, a
13 large plant, because it couldn't, it wasn't profitable. And my
14 understanding is Land O'Lakes closed a cheese plant several
15 years because it wasn't profitable. Now, I don't have private
16 information into the amount of monies that they made or didn't
17 make, I don't know that. But I do know they closed. And I --
18 I assume they closed because they weren't profitable.

19 Q. Okay. But your, the basis for saying, the reason you
20 are providing for their closure is based on an assumption you
21 are making not any other --

22 A. Based on assumption that I'm making because I talked to
23 a lot of people that were involved and were told that.

24 Q. Okay. But other than that, you don't have any direct
25 information?

1 A. No, I don't have any direct information. I couldn't
2 tell you how much money they made or didn't make.

3 Q. Okay. In the next paragraph you talk about, toward the
4 end you say "the cost of raw milk into a cheese plant can be 95
5 percent of its total cost."

6 A. Maybe even higher.

7 Q. Is that true at Gallo?

8 A. Our largest cost in the cheese plant is the cost of the
9 raw milk. We even, on our own farm, we pay our own farms a
10 premium over and above the 4b price whether we pooled or
11 depooled.

12 Q. In your experience, is that a or a low, this 95
13 percent?

14 A. I think it is probably a good average. When I ask what
15 the cost of milk is down to Gallo, they tell me it is about 95
16 percent.

17 Q. In that same paragraph you talk about, you know, one of
18 the bases for your opposition to the cooperatives' proposal is
19 that it may mean closure for some small cheese plants. But
20 based on your testimony, that doesn't seem to be true for
21 Gallo; is that right?

22 A. I think we have some abilities at Gallo that others may
23 not have. I think some of those are buying a hundred percent
24 of their milk from other suppliers or are more at a
25 disadvantaged position than what Gallo would be. If Gallo was

1 buying a hundred percent of their milk from other suppliers, we
2 might have to close. But we have the advantage of having some
3 of our own cows. And we have the advantage, if we needed to,
4 to cut back on the amount of cheese we make except our branded
5 cheese, which is profitable, and increase the number of cows
6 that we have to make that cheese. Our cows are all crossbred
7 or Jerseys, they have a high cheese yield, and we take
8 advantage of that. Most of the milk we purchase, or can
9 purchase, is milk that is Holstein milk, which has a much lower
10 cheese yield.

11 And so we would do whatever we needed in order to try
12 to stay in business. It could be we would sell out and be an
13 almond farmer. I wouldn't want to see that because I don't
14 know anything about almonds.

15 Q. But you are learning.

16 A. I really don't want to know about almonds. I love the
17 dairy business. I would have to go to work for one of your
18 people.

19 Q. Okay. Just a couple more questions. The next
20 paragraph you talk about the Dairy Institute's proposal of
21 moving the whey pricing from dry whey to the WPC. Have you
22 done any studies on that?

23 A. We haven't done a lot, but we know in our own pricing
24 of the WPI. The WPC market is a much closer market oriented
25 price than dry whey on our sales for WPI, and our sales are

1 based off of that market, yet we still use, for regulations,
2 the dry whey price. Right now it is probably an advantage to
3 us, but not necessarily selling our WPI, but paying for the
4 milk. But -- but that, like everything else, is, that market's
5 volatile it will be turn around go the other direction one of
6 these days.

7 Q. And have you done any studies on what the impacts would
8 be of changing that -- that method of pricing?

9 A. No. But I'm sure there's others that testified here
10 that they have.

11 Q. Okay. Thank you, Mr. Paris. That's all I have.

12 A. Thank you.

13 JUDGE CLIFTON: Mr. Paris, I would like you to go down to
14 your fourth paragraph of your testimony,

15 MR. PARIS: First page of it?

16 JUDGE CLIFTON: Yes, please.

17 MR. PARIS: Okay.

18 JUDGE CLIFTON: At the end of that paragraph when you are
19 talking about "we concentrate whey from our own plant and are a
20 market for whey protein concentrate, WPC, from other small
21 plants in the area."

22 MR. PARIS: Uh-huh.

23 JUDGE CLIFTON: In what form does that WPC come to you from
24 those other small plants in the area?

25 MR. PARIS: It's in liquid form.

1 JUDGE CLIFTON: And what concentration is it, if you know?

2 MR. PARIS: It's WPC 34, most of it. We do buy some that
3 is not that high. It's -- it just RO'd, and it is a little
4 less, it is not as concentrated as the other. RO is reverse
5 osmosis that they use, they take the water out of it, but it is
6 not WPC.

7 JUDGE CLIFTON: Do you know if that liquid form that comes
8 to your plant has been pasteurized and cooled before it is
9 shipped to you?

10 MR. PARIS: Yes, it is. And we have very high standards,
11 quality standards on it coming in, plus it needs to be Kosher.

12 JUDGE CLIFTON: Okay. Thank you. Who next has questions
13 for Mr. Paris? Mr. Miltner?

14 CROSS-EXAMINATION

15 BY MR. MILTNER:

16 Q. Mr. Paris, just a couple quick questions. The first is
17 triggered by your last answer. Is all your cheese and all your
18 products Kosher?

19 A. Yes.

20 Q. Okay. Are you familiar with the manufacturing cost
21 surveys that CDFA publishes?

22 A. Yes, I look at those.

23 Q. Okay. Are any of your plant's costs included in those
24 studies?

25 A. I think so currently. I know in the past they have

1 been.

2 Q. Okay. Now --

3 A. Cheese plant.

4 Q. Okay. So I'm -- you have testified that the raw milk
5 is 95 percent of your total cost. Okay?

6 A. Somewhere in that area.

7 Q. Somewhere in that area.

8 A. Yeah, if I was to ask what, how much is the percentage
9 of our cost is raw milk? They would tell me 95 percent,
10 because I have asked that question, that's the reason I know
11 that.

12 Q. Sure. So CDFA says that the total cost to make cheese
13 is about 23 cents a pound.

14 A. Okay.

15 Q. Okay. And that doesn't include obviously the raw
16 product cost.

17 A. Correct. That's what it just cost to make it.

18 Q. Right. So if I do the math it seems either you're
19 selling your cheese for about \$5.00 a pound, which I don't
20 think is the case --

21 A. No.

22 Q. Or your manufacturing costs are substantially less than
23 California's weighted average?

24 A. I think if you looked at the cost study, the cost study
25 that Gallo is in is one of the smaller units with higher costs.

1 Q. Okay. Thank you. That's all I have.

2 JUDGE CLIFTON: Who next has questions for Mr. Paris?
3 Mr. Vandenneuvel?

4 CROSS-EXAMINATION

5 BY MR. VANDENHEUVEL:

6 Q. Good afternoon, Joe.

7 A. Good afternoon, Rob.

8 Q. Rob Vandenneuvel, Milk Producers Council. Just a
9 couple of questions.

10 You had mentioned that you can't talk about the
11 specific volumes of milk that you produce versus milk that you
12 purchase going into the plant, but you did testify that Joseph
13 Gallo Farms milks about 8,000 cows, correct?

14 A. Yes.

15 Q. And so just my back-of-the-envelope calculations that
16 equates somewhere in the vicinity of 200 million pounds of milk
17 a year, so which would mean you would be buying more than half
18 of the milk that goes through your plant. Would that sound
19 generally accurate?

20 A. We buy more than half the milk going into our plant.

21 Q. Okay. Thank you. There's some testimony in your
22 exhibit about some of the your sales specifically to Mexico.

23 A. Uh-huh.

24 Q. And some commentary on the second page of the text,
25 about some of the challenges of those markets and that, talking

1 about Middle Class in Mexico is not the same as the Middle
2 Class here in the United States?

3 A. Correct.

4 Q. And some of the testimony included limitations for, you
5 know, getting additional values out of those markets because
6 they just, as you said, can't afford to pay higher prices for
7 this their products?

8 A. My experience is that they are a little more price
9 sensitive there than they are domestically here.

10 Q. Now, those export sales have been part of your, part of
11 Gallo farms growth strategy over the years in reaching new
12 markets?

13 A. Yes. And we sell branded product down there.

14 Q. Sell branded product. And so that has allowed Gallo
15 Farms to grow their market share, or their sales, through, in
16 addition to the domestic markets, now some export markets?

17 A. Yes.

18 Q. So in interpreting your testimony, it seems to
19 indicate, and I would like you to tell me if this is inaccurate
20 or, you know, you don't agree with this, but it seems to
21 indicate that your decision to export into these markets and
22 the limitations in getting value added dollars out of the
23 marketplace in those sales to Mexico, that you tie that to the
24 opportunity to buy lower cost milk in California. And what I
25 mean by that is the testimony, as I read the testimony, it

1 seems to sound like, to the extent that you are selling your
2 products at a discount, you think that it's only appropriate to
3 pass that discount along through a lower regulated milk price.
4 Would that be part of your testimony?

5 A. I would say because of the pricing in California, that
6 it is a big part of the reason we can send branded cheese into
7 Mexico.

8 Q. So essentially that discount --

9 A. If that was eliminated, that might eliminate that
10 market.

11 Q. So that discount in those prices of products that you
12 are getting relative to comparable, branded domestic sales,
13 your testimony is that it is appropriate to pass that discount
14 along in the form of a lower regulated milk price to the dairy
15 farmers who are supplying more than half of the milk you need?

16 A. No, I'm not saying that at all. I'm saying that we
17 find that through the California system and the regulated
18 prices in California, we have the ability to sell our branded
19 product into Mexico at a price that they are willing to pay.
20 That's what I'm saying. And as I looked at the Federal Order
21 prices were in there, we would sell much less product into
22 Mexico, because of the 22 cents per pound increase in that
23 cheese price.

24 Q. So Joseph Gallo Farms is only willing to sell milk into
25 Mexico at the prices that the market will gather, as long as

1 they can pay a lower price for the milk that they buy relative
2 to Federal Order competition?

3 A. No, I'm not saying that. What I'm saying is that we
4 have been able to sell product into Mexico at the prices of the
5 regulated prices and what we pay in premiums for several years.
6 If the Federal Order came in and our prices went up 22 cents a
7 pound, and it, I have not looked that over five or six years,
8 and that is over the 18, 19 month period, which is significant,
9 it might be difficult to do it. Because the Middle Class that
10 are customers in Mexico, are more price sensitive than the
11 Middle Class people in the State of California.

12 Q. So if Joseph Gallo farms had to pay a price --

13 A. We are paying a price.

14 Q. Let me finish my sentence, sir. If Joseph Gallo Farms
15 had to pay a price equal to the Federal Order Class III as
16 proposed, which is the price that applies in the other ten
17 Federal Orders on a regulated basis, Joseph Gallo Farms would
18 longer be willing to sell as much milk into Mexico.

19 A. We don't sell milk.

20 Q. Correction. Joseph Gallo Farms would be -- would not
21 be willing to sell as much cheese into Mexico because of that
22 higher price?

23 A. That's -- we would be willing to sell all the cheese we
24 could sell down there. The problem is, the consumer wouldn't
25 buy it.

1 Q. Okay.

2 A. That's the problem.

3 Q. And fortunately, in California you are able to secure
4 cheaper milk supplies than you would in the Federal Order areas
5 to help pass that discount along to the producer?

6 A. I didn't say that. I think -- I think that from my
7 analysis from what I have looked, that the prices in California
8 would be higher under the cooperative proposal than they are
9 now.

10 Q. I agree with you there. Thank you very much.

11 JUDGE CLIFTON: Mr. Beshore?

12 CROSS-EXAMINATION

13 BY MR. BESHORE:

14 Q. Marvin Beshore. I said I wasn't going to cross-examine
15 Joe Paris.

16 A. Well, I would have been hurt if you hadn't.

17 Q. And I'm not going to, we go back too far. But I have
18 got one question, what is the market for Kosher WPI?

19 A. Honestly, Marvin, I really don't know what it is, but
20 most WPI needs to be Kosher. The market almost demands Kosher
21 WPI, as I know it. And the people we deal with on it, as I
22 understand it, the people we sell it to demand Kosher WPI.

23 Q. Do you know, are the prices for Kosher WPI published
24 anywhere, any price surveys, price series?

25 A. I don't know that you can find that much of a price

1 series on WPI anywhere that's reliable. I wish that we had
2 one, because I have looked for it, and there's nothing out
3 there really. All you get is WPC and those things and that's
4 what you have to look at to determine one way or the other.

5 Q. You make sure you pass the Rabbi's fees along?

6 A. Don't get me started on that.

7 Q. I won't.

8 JUDGE CLIFTON: Who next has questions for Mr. Paris?

9 Ms. Taylor?

10 CROSS-EXAMINATION

11 BY MS. TAYLOR:

12 Q. Good afternoon, Mr. Paris.

13 A. Good afternoon.

14 Q. My name is Erin Taylor. I'm with the USDA and I want
15 to thank you first for coming here today and sharing the views
16 of your company --

17 A. Thank you.

18 Q. -- at this proceeding. I just have a few questions as
19 we're nearing the end of our day.

20 Your whey plant, you gave processing capacity for the
21 cheese plant, how much whey do you produce a year, if you know?

22 A. I don't know that I can give you a total amount of
23 that. I mean, we probably have those numbers, I just didn't
24 get them for this particular hearing. Like I said, I prepared
25 this very rapidly.

1 Q. So I might ask you some questions, and if you don't
2 know, that's fine, but I'll just ask them.

3 My first question, just because I'm curious, can you
4 tell me what pasta filata cheese is because I've actually never
5 heard of that?

6 A. Mozzarella balls.

7 Q. Mozzarella balls. Okay. Thanks.

8 A. That's what we make. To some extent, provolone is the
9 same kind of a process. We also sell Mozzarella, low,
10 six-pound loaves that are -- it's cooked Mozzarella is what it
11 is. We also make block Mozzarella, which is just stirred curd.

12 Q. Okay. You buy whey WPC from other sources to process
13 at your plant. Do you pay the haul for that? Do you buy it
14 FOB the plant you are buying it from, do you know?

15 A. We pay the haul on it, and then we price it back to
16 them based on, at their plant. But we pick it up and pay the
17 haul on it.

18 Q. And do you know about how far the average haul is on
19 those loads that you buy?

20 A. I can --

21 Q. Just an estimate?

22 A. One place is about 300 miles, one place is about 20
23 miles, the other place is about 30 miles.

24 Q. So you buy from about three different plants?

25 A. Yes.

1 Q. Okay. And your distribution domestically, is that
2 throughout the United States?

3 A. Of the WPI?

4 Q. No, of your cheese. I know most of it's found in
5 grocery stores.

6 A. Most of our cheese is in the Pacific Northwest,
7 California, Arizona, Mexico, and we do sell some to
8 distributors that you can find it on the East Coast, but that's
9 going through some distribute or that we sell to.

10 Q. Okay.

11 A. We don't market it out there in those areas at all.

12 Q. Okay. On the second page of your testimony you talk
13 about the 22.37 cents.

14 A. Uh-huh.

15 Q. And the final sentence in that paragraph says, "this
16 kind of cost increase would make us uncompetitive in every
17 market, in every market we service and possibly eliminate our
18 sales to Mexico." And I know you just had a conversation about
19 your sales to Mexico, so I'm not necessarily focused on that.
20 But uncompetitive in your domestic markets, would you, if all
21 the other cheese plants in California are still paying the same
22 regulated price, would you still consider yourself
23 uncompetitive, if that price happened to be higher?

24 A. I realize that, you know, there is that situation where
25 if you are paying, if everybody is regulated, you all pay the

1 same price, although there are differences in what you pay in
2 premiums in that such a thing. In that relationship, we would
3 not be uncompetitive in some of the markets that we serve. But
4 the cost would be much higher, and it could be that some of
5 those other plants would go out of business and things like
6 that, and, you know, or we might. We might not be able to pass
7 all that along to our customers. You have to pass cost
8 increases on to your customers. Sometimes you can, sometimes
9 you can't.

10 Q. So you might be competitive, but because of the cost
11 increase, you might be selling less cheese because it is
12 higher?

13 A. Yes. Certainly Mexico and any other exports are an
14 issue.

15 Q. You said that the cheese plant is a nonpool plant in
16 California currently?

17 A. Yes.

18 Q. So I don't know, I'm learning about the California
19 system and have been learning for the past year, but you have a
20 nonpool plant status, but you still have to pay the regulated
21 minimums, am I correct, for that milk?

22 A. Yes.

23 Q. You don't get --

24 A. Based on in-plant utilization.

25 Q. Okay. And on the last page of your statement, first

1 paragraph, you talk about milk being purchased, "it has been
2 reported that milk has been purchased as much as \$7 a
3 hundredweight below the minimum regulated prices in the spring
4 and summer of 2015." I just wanted to know your source or is
5 that just what you have heard from conversations, or --

6 A. I know a lot of people. I have worked from Maine to
7 California. I know a lot of people and I stay in touch with
8 them what's going on in the marketplace and around. And I know
9 from at anecdotal information I have, that last spring in the
10 Northeast, milk was selling for less than, selling \$7 under the
11 regulated price. And I have also heard that a lot of milk out
12 there was being skimmed, the fat was being sold and skim was
13 being dumped.

14 JUDGE CLIFTON: And the skim was being what?

15 MR. PARIS: Dumped.

16 JUDGE CLIFTON: Dumped.

17 MR. PARIS: And I think there's been other publications
18 that have actually talked about that issue.

19 MS. TAYLOR: I think that's all I have. Thank you very
20 much for coming here today.

21 MR. PARIS: Thank you.

22 MS. TAYLOR: I think my colleague has one.

23 CROSS-EXAMINATION

24 BY MS. MAY:

25 Q. Laurel May from USDA. I had just one question. On the

1 second page of your testimony of the text, in the fourth
2 paragraph down, you say "because of transportation costs,
3 they," meaning the Midwest and East Coast producers, I guess,
4 "can demand higher prices for their products."

5 Can you clarify that, they, and --

6 A. Many of the products coming out of the Midwest are
7 going to the East Coast, so they are demanding a premium for
8 that to cover transportation costs, plus others. And you can
9 look in the Dairy Market News, you can see what some of those
10 sales are on a regular basis. Much higher than what you can
11 sell cheese for in the State of California.

12 Q. So you are saying that they are charging at higher
13 prices because they are adding --

14 A. They have to recover their transportation, but they are
15 in a place that they can do that. We can't -- we can't sell
16 any cheese to the East Coast because our transportation costs
17 would be way too high.

18 Q. Did you have, were you here when Dr. Stephenson was
19 testifying?

20 A. Just for a little bit this afternoon, yeah.

21 Q. Because he showed us a chart that shows the
22 distribution of cheese going all the way across the country
23 from California, so that's kind of an interesting contrast.

24 A. Let me say this, the type of cheese and the size of
25 plant that we do in California is different from what some

1 company as big as Hilmar might do. Now, they would have a huge
2 cost increase also. But they may be selling out East, I don't
3 know whether they are. I don't know how their marketing goes,
4 but I know they are a lot larger plant, probably a much more
5 efficient plant than we are at Gallo, although we try our best,
6 and we don't compete in that market. We compete in the market
7 where we have a branded cheese that we think tastes better than
8 anybody else's out there and that's where our sales are at,
9 because of the recipes we use and have used for a long time.
10 And we have a reputation for having the best Pepper Jack Cheese
11 there ever was, and our our extra sharp cheddar will stand up
12 to anybody's anywhere, and I don't care whose, and we proved
13 that with blind taste tests with Costco and some other
14 companies. So we're in a different market than larger plants
15 might be.

16 Q. Okay. It was just, the way the sentence was written
17 confused me.

18 A. It's not really a good sentence. I probably shoulda
19 re-done that. Like I said, late at night I'm doing this and
20 it's not, it's not as good as it could have been, I'll put it
21 that way.

22 Q. So then your answer just prompts me to ask one more
23 question. You mentioned earlier that most of your distribution
24 is here on the West Coast --

25 A. Yes.

1 Q. -- and to Mexico, but then you said you do have some
2 Eastern sales. Is that with the same branded product that you
3 sell here or is it under different labels?

4 A. It's the same branded product that gets picked up by
5 somebody we sell with out here in this area, it could be in
6 Arizona, I don't know where it would be. But it gets picked up
7 in their system, and we have heard that people call us and say,
8 hey, I bought your cheese, how can I get that on a regular
9 basis? Well, we don't supply it out there, but somebody that
10 we sell that's a distributor may be selling some of it out
11 there. It's not a large amount at all. And we have nothing to
12 do where they sell it. We sell to them in California or
13 Arizona and they buy it some, sell it someplace else.

14 Q. That's interesting. Thank you so much.

15 A. Thank you.

16 JUDGE CLIFTON: I know we're running short on time, but
17 I'll invite any further questions. Do you have any redirect
18 Ms. Vulin?

19 MS. VULIN: No further questions. I just wanted to thank
20 you, Mr. Paris, for joining us. I know that it was a long trip
21 and we really appreciate you fitting us in.

22 MR. PARIS: Well, I'm glad I did.

23 JUDGE CLIFTON: I am, too. Now, Mr. Paris, you told me
24 that your testimony was going to be very short.

25 MR. PARIS: It was.

1 JUDGE CLIFTON: And I told you that I liked the sound of
2 your voice and I was hoping you would testify for a long time.

3 MR. PARIS: Well, my voice is not like what it once was.
4 But I came from Southern Missouri and I still, even though I
5 have worked in the North and worked in California since 1977,
6 still got that, a little bit of that Hillbilly twang to it.

7 JUDGE CLIFTON: Thank you so very much, Mr. Paris.
8 Mr. English?

9 MR. ENGLISH: I want to thank you, too, Mr. Paris. Good to
10 see you again. All right. It is that time of our program.

11 JUDGE CLIFTON: Yes, 4:57.

12 MR. ENGLISH: I think I remember Mr. Beshore yesterday
13 asking who my witness would be this afternoon when Ms. Taylor
14 got off the stand mid-afternoon. So -- and at the time I said
15 I really don't know how long Dr. Stephenson would go.

16 So Ms. Taylor will start tomorrow morning,
17 Ms. Sue Taylor, unless Ms. Erin Taylor wishes to get on the
18 stand, but I think it is not the right answer, so, for her. So
19 Ms. Sue Taylor will be back on the stand first tomorrow morning
20 with Part 2 of her testimony. And we did divide it up into
21 Part 2 and 3, and there will be another part either later
22 tomorrow or Friday morning, just to get it done.

23 We also now have another known known that used to be a
24 known unknown -- that's the last time I'll say that -- from
25 Nestle, a short, relatively short statement from

1 Steve Kluesner, K-L-U-E-S-N-E-R. Then the order will depend,
2 but we do expect to discuss quota tomorrow, and Dr. Schiek will
3 return to the stand to discuss quota. And I'm not promising
4 the order after I get past Nestle, I'm not promising the order.
5 So Dr. Schiek on quota, Mr. Zolin on Section 9 (d), which is
6 his Part 6.

7 I understand from Mr. Beshore we may have a dairy
8 farmer at some point, and I sort of put it in there because I
9 figured that maybe lunch time, we'll see. We have
10 Mr. Blaufuss, Part 4, on fortification.

11 We have got Mr. Zolin, Part 7, on a modification to
12 7 (c). Not completely yet done, so I'm not sure whether it
13 will be ready for tomorrow. And then we have, if it's ready,
14 Sue Taylor, Part 3.

15 If all that gets done, so be it. That would mean for
16 Friday morning we would have Dean Foods testifying on the
17 producer-distributor exempt quota issue. I don't think it's,
18 again, as I have said all week, I don't think it is likely that
19 we'll get the transportation credits piece done, and I may have
20 some stray cats that show up next week.

21 JUDGE CLIFTON: You may have what?

22 MR. ENGLISH: I call them stray cats.

23 JUDGE CLIFTON: Stray cats?

24 MR. ENGLISH: Witnesses that have sort of indicated they
25 might show up. So I don't know what to say to Ms. Hancock, and

1 I, you know, I just don't know whether we can get all of that
2 done, and I don't know where that puts you. I have tried to
3 have conversations with you and do the best I can to keep you
4 informed. And Mr. Beshore, you have a question?

5 MR. BESHORE: Nestle's topic?

6 MR. ENGLISH: It is going to be like other entities,
7 general. It will be general.

8 JUDGE CLIFTON: Mr. Beshore's question was Nestle's topic,
9 to which Mr. English responded, general.

10 Ms. Hancock, I believe your witness needs to testify
11 Friday, coming in specifically for that purpose; is that
12 correct?

13 MS. HANCOCK: Nicole Hancock. No, we do not have a witness
14 that needs to testify on Friday. We have a witness who is
15 local that we can have testify on Friday and will be ready,
16 will likely be here anyway for the producer-handler discussion,
17 I'm hoping. So I think it will be fine. We can put him on or
18 not. It will give us some flexibility.

19 Beyond, if for some reason things moved really fast
20 beyond that witness, I don't have anyone else on Friday
21 available. To me it's a little bit too risky to try and bring
22 more people in to leave them hanging over the weekend. So I do
23 have somebody that, my Federal Order witness, I believe, will
24 need to be off the stand by Tuesday. But at this point, it
25 still looks -- I'm still optimistic.

1 JUDGE CLIFTON: Good. Thank you. That's very helpful.
2 Mr. Beshore?

3 MR. BESHORE: Well, just to get all the information out
4 here. There is a producer tomorrow, and another one that I'm
5 told is coming in Friday.

6 JUDGE CLIFTON: Do you know their names?

7 MR. BESHORE: The, Friday is Mr. Doornenbal, who was here
8 earlier is coming back, I'm told. And I don't have the name
9 for tomorrow.

10 JUDGE CLIFTON: All right. Thank you.

11 MR. BESHORE: I don't think I have a name.

12 JUDGE CLIFTON: All right. Thank you so much. We go off
13 record at 5:02. See you in the morning.

14 (Whereupon, the evening recess was taken.)

15 ---o0o---

16

17

18

19

20

21

22

23

24

25

	6082:24;6084:15; 6088:2,17;6096:9; 6105:21;6109:14; 6121:4;6122:3; 6126:6	23	6064:24;6078:22; 6088:16;6091:19; 6119:5	5945:7,13,17; 5951:5;5952:7; 5960:8;5963:8; 5964:17,19;5966:11; 5968:12;5979:16; 5981:5,17;5984:12; 5988:5;5990:13; 5996:16;5997:21; 6000:23;6001:18,18; 6002:19;6005:16; 6009:11;6015:25; 6017:14;6018:16,23; 6019:7;6034:2; 6045:4;6047:14; 6048:10;6049:12; 6055:4;6057:1; 6061:5;6066:12; 6067:24;6083:7; 6084:5;6089:25; 6090:9;6110:8; 6131:10;6132:18
#	above (14) 5956:12,14; 5961:19;5964:16; 5965:4,9;5969:18; 6024:20;6035:13; 6050:8;6054:13; 6071:4,18;6113:10	across (18) 5938:15;5939:17; 5943:3;5949:7,12, 15;5952:7;5954:9; 5955:20;5958:16; 5983:9;5992:9; 5998:16;6036:4; 6050:22;6051:20; 6071:1;6128:22	address (1) 5979:3 addressed (2) 5979:4;6056:20 addressing (2) 5969:12;5976:7 adequate (2) 5945:24;5981:20 adhere (1) 6041:16 adjusted (1) 6109:10 adjuster (1) 6075:24 Administrative (1) 5927:7 Administrator (2) 5927:19;5928:3 admission (5) 5997:2,5,12; 6091:5,8 admitted (4) 5978:9;5997:7,14; 6091:9 adopted (2) 6084:12,20 advance (1) 6075:14 advantage (12) 6072:13;6073:19; 6074:10;6084:24; 6085:18,20;6096:14; 6102:15;6114:2,3,8; 6115:2 advantages (1) 6071:16 advantaging (1) 6075:25 affect (5) 5969:20;6023:8; 6036:1;6070:25; 6092:24 affecting (1) 5955:2 affirm (2) 5936:19;6078:8 affirmative (1) 6043:5 afford (5) 5950:19;5970:5, 14;6073:23;6119:6 AFTERNOON (17) 6028:1,7,8; 6047:24,25;6070:10; 6077:20;6091:22,23; 6104:4,5;6118:6,7; 6123:12,13;6128:20; 6131:13 again (49) 5933:24;5937:23;	5945:7,13,17; 5951:5;5952:7; 5960:8;5963:8; 5964:17,19;5966:11; 5968:12;5979:16; 5981:5,17;5984:12; 5988:5;5990:13; 5996:16;5997:21; 6000:23;6001:18,18; 6002:19;6005:16; 6009:11;6015:25; 6017:14;6018:16,23; 6019:7;6034:2; 6045:4;6047:14; 6048:10;6049:12; 6055:4;6057:1; 6061:5;6066:12; 6067:24;6083:7; 6084:5;6089:25; 6090:9;6110:8; 6131:10;6132:18 against (3) 5932:22;5980:16; 6014:18 agency (3) 6074:16;6079:4; 6099:14 aggregate (3) 5940:14;6004:19; 6035:2 aggregated (1) 5941:17 aggregating (1) 6012:25 aggregation (1) 5941:19 aggregator (2) 5962:20;6065:11 aggregators (1) 6065:15 agnostic (1) 6032:11 ago (9) 5933:10;5963:10; 5972:24;6012:10; 6034:25;6060:19; 6061:1,2;6110:2 agree (14) 5935:9;6020:19; 6028:13,16;6029:22; 6031:8;6070:19,20, 22;6072:18,24; 6073:8;6119:20; 6122:10 agreed (1) 6056:10 agreement (1) 5935:18 Agribusiness (1) 5932:6 Agricultural (11) 5927:20;5928:7; 5937:4,6;5938:5;
#1 (2) 5949:9;6091:21	absolute (1) 5952:8 absolutely (10) 5978:23;5981:21; 5984:6;5986:22; 5990:15;6030:12; 6050:7;6067:12; 6072:9;6100:22 absorbed (2) 6023:21;6030:24 accept (3) 5977:21;5978:1; 6036:7 accepted (1) 5974:23 accepting (1) 5977:23 access (4) 5931:8;5932:7; 5947:1;5979:17 accessible (1) 5933:20 accompany (1) 6027:17 according (2) 5940:3;6059:17 account (6) 5954:3;6018:9; 6039:25;6041:12; 6044:4;6049:12 accounted (3) 5942:13;5992:11; 6047:2 accounting (2) 5940:9;5992:15 accounts (2) 5942:2;6044:15 accumulated (1) 5927:10 accurate (1) 6118:19 achieve (1) 5951:25 achieves (1) 6032:12 acid-based (1) 6039:10 acquaintances (1) 5969:9 acres (3) 6081:4;6109:22,	actual (5) 5942:17;5947:9; 5983:21;6050:8; 6092:25 actually (46) 5941:23;5974:5; 5978:15;5979:12,22; 5981:25;5983:12,21, 24;5984:10; 5985:11;5995:21; 6002:23;6006:22; 6009:8,23,24; 6011:1;6020:12; 6024:23;6043:12; 6045:2;6046:10; 6047:8;6048:19,22; 6050:16;6051:6; 6059:10;6062:15; 6065:21;6067:13; 6069:9;6071:8,15; 6076:21;6079:19; 6090:5,24;6092:1; 6093:8;6096:6,9; 6098:14;6124:4; 6127:18 add (17) 5934:19;6004:19; 6021:8;6037:21; 6063:1,8,24; 6067:19;6077:8; 6078:22;6083:14,14; 6084:23;6088:15,15; 6089:22;6091:13 added (10) 5950:24;5958:1; 5965:3;5979:4,22; 5990:21;5991:12; 5992:16;6006:18; 6119:22 adding (2) 6083:10;6128:13 addition (4) 5947:22;6006:17; 6091:13;6119:16 additional (25) 5940:18;5947:1,3; 5948:9,15;5957:2; 5965:3;5973:12; 5979:18;5988:14; 6023:25;6029:12; 6036:25;6037:5,9, 14;6038:18,21; 6054:1;6057:8;	admission (5) 5997:2,5,12; 6091:5,8 admitted (4) 5978:9;5997:7,14; 6091:9 adopted (2) 6084:12,20 advance (1) 6075:14 advantage (12) 6072:13;6073:19; 6074:10;6084:24; 6085:18,20;6096:14; 6102:15;6114:2,3,8; 6115:2 advantages (1) 6071:16 advantaging (1) 6075:25 affect (5) 5969:20;6023:8; 6036:1;6070:25; 6092:24 affecting (1) 5955:2 affirm (2) 5936:19;6078:8 affirmative (1) 6043:5 afford (5) 5950:19;5970:5, 14;6073:23;6119:6 AFTERNOON (17) 6028:1,7,8; 6047:24,25;6070:10; 6077:20;6091:22,23; 6104:4,5;6118:6,7; 6123:12,13;6128:20; 6131:13 again (49) 5933:24;5937:23;	5945:7,13,17; 5951:5;5952:7; 5960:8;5963:8; 5964:17,19;5966:11; 5968:12;5979:16; 5981:5,17;5984:12; 5988:5;5990:13; 5996:16;5997:21; 6000:23;6001:18,18; 6002:19;6005:16; 6009:11;6015:25; 6017:14;6018:16,23; 6019:7;6034:2; 6045:4;6047:14; 6048:10;6049:12; 6055:4;6057:1; 6061:5;6066:12; 6067:24;6083:7; 6084:5;6089:25; 6090:9;6110:8; 6131:10;6132:18 against (3) 5932:22;5980:16; 6014:18 agency (3) 6074:16;6079:4; 6099:14 aggregate (3) 5940:14;6004:19; 6035:2 aggregated (1) 5941:17 aggregating (1) 6012:25 aggregation (1) 5941:19 aggregator (2) 5962:20;6065:11 aggregators (1) 6065:15 agnostic (1) 6032:11 ago (9) 5933:10;5963:10; 5972:24;6012:10; 6034:25;6060:19; 6061:1,2;6110:2 agree (14) 5935:9;6020:19; 6028:13,16;6029:22; 6031:8;6070:19,20, 22;6072:18,24; 6073:8;6119:20; 6122:10 agreed (1) 6056:10 agreement (1) 5935:18 Agribusiness (1) 5932:6 Agricultural (11) 5927:20;5928:7; 5937:4,6;5938:5;
\$				
\$1.20 (1) 5994:1				
\$1.40 (1) 5995:16				
\$1.60 (3) 5994:23;5995:12, 18				
\$1.79 (1) 5962:14				
\$2 (2) 5994:11;6086:16				
\$2.00 (1) 6094:6				
\$2.36 (4) 5993:16,24; 5994:10;6034:15				
\$2.40 (1) 5995:24				
\$2.50 (1) 5995:24				
\$3.50 (1) 5993:17				
\$5 (1) 5993:20				
\$5.00 (2) 5994:6;6117:19				
\$6 (1) 6076:23				
\$7 (3) 6087:18;6127:2, 10				
\$8 (1) 6076:20				
[
[AO] (1) 5931:25				
A				
abilities (1) 6113:22				
ability (6) 6066:3;6072:23; 6086:20;6096:16; 6111:22;6120:18				
able (19) 5937:16;5944:21; 5958:14;5967:8; 5970:5,6;6009:3; 6049:25;6055:5;				

<p>5939:7;5940:14; 5974:23;5975:14; 5977:24;5978:1 Agriculture (5) 5931:25;5939:5; 5947:13;6075:19,21 ahead (4) 5978:12;5981:25; 6048:9;6056:10 Airport (1) 5931:18 Alan (1) 5929:16 A-L-A-N (1) 5929:16 algorithm (1) 6019:17 allow (4) 5957:1;6071:22; 6086:15;6087:12 allowable (2) 5992:2;6040:4 allowance (2) 6047:9;6055:16 allowed (3) 5956:10;6087:9; 6119:14 allows (2) 6088:9;6090:20 almond (2) 6109:22;6114:13 almonds (4) 6100:6;6109:20; 6114:14,16 almost (4) 5994:11;6075:11; 6084:14;6122:20 alone (1) 6087:14 along (12) 5933:14;5959:19; 5960:12;5978:17; 6007:21;6024:18; 6037:14;6120:3,14; 6122:5;6123:5; 6126:7 alternative (1) 6081:11 Alternatively (1) 5957:25 alternatives (1) 5939:9 Although (18) 5941:21;5944:18; 5947:7,8;5958:18; 5961:2;5978:7; 5994:20;6026:9; 6037:6;6045:1; 6055:6;6075:5; 6094:11;6107:22; 6109:2;6126:1; 6129:5 always (10)</p>	<p>5973:4;5991:15; 6006:10;6029:6,18; 6030:6;6036:24; 6058:20;6062:22; 6082:10 America (1) 5928:13 American (14) 5946:10;6011:2,6, 7,12,25;6012:1,13; 6013:25;6031:24; 6032:1;6033:5; 6034:23;6035:2 American-style (5) 6011:4,14,16,18; 6064:19 among (1) 6022:18 amongst (1) 6071:16 amount (19) 5946:3;5980:3; 6001:2;6040:3,4; 6050:2;6052:6; 6054:12;6063:2; 6081:7;6088:13; 6092:13,14;6100:6; 6108:7;6112:16; 6114:4;6123:22; 6130:11 amounts (3) 5940:7;5943:18; 5984:6 AMS (13) 5927:23;5928:5; 5931:9;5932:11,12; 5938:2;5939:7,16; 5948:23;5949:2; 5955:7;5965:2; 5985:23 analyses (4) 5952:3;5955:11; 5976:15,20 Analysis (10) 5937:24;5938:7; 5951:9;5952:14; 5962:9;5977:3,5; 5993:21;6093:14; 6122:7 Analyst (1) 5929:13 analytical (1) 5947:23 and/or (3) 5962:24;5999:5; 6069:13 Andrew (1) 5949:6 anecdotal (1) 6127:9 Angeles (9) 5980:9,13,14,19, 22;5981:10;6044:20,</p>	<p>21;6045:15 animal (2) 6097:20,25 announce (2) 5967:6;6077:17 announced (2) 5955:8;5965:2 announcement (1) 5965:22 announcements (2) 5930:22;5967:6 annual (1) 6111:23 answered (3) 6003:13;6043:5,8 anticipated (1) 6061:9 anymore (1) 6035:22 A-O (1) 5929:22 apologies (1) 6034:24 apologize (4) 5932:23;5992:19; 5996:22;6000:2 Appalachian (1) 5955:9 apparently (1) 5987:2 appear (1) 6025:22 appearances (1) 5927:12 appearing (2) 5932:21;5938:3 appears (2) 6034:13;6072:20 apple (1) 6062:16 applied (2) 5968:19,24 applies (3) 6071:4,18; 6121:16 apply (2) 6040:23;6043:13 appointed (1) 6080:7 appreciate (12) 5933:7;5936:5; 5937:15;5977:17; 5996:18;6051:8; 6057:16,21;6061:7; 6077:10,12;6130:21 approach (3) 5995:3;6075:17, 24 approaching (1) 5931:3 appropriate (2) 6120:2,13 approximate (1)</p>	<p>5956:10 approximately (4) 5927:3;5931:7; 5973:1;6081:3 April (1) 5952:20 arbitrary (1) 6054:8 area (38) 5937:4;5961:12, 22;5980:9,13,18,22; 5981:7,9;5982:19; 5983:9;6001:13; 6002:2;6012:16; 6018:2;6019:3; 6023:2;6030:23; 6036:13;6038:18,23; 6044:19;6054:11; 6058:6;6070:11; 6072:19;6073:22; 6075:25;6076:1; 6079:19,20;6082:1; 6087:9;6115:21,24; 6117:6,7;6130:5 areas (20) 5948:4;5950:2,3; 5951:18;5984:7,10; 5985:11;6020:19,22; 6024:14;6050:25; 6061:16;6069:3; 6071:3,17,17; 6086:7;6088:19; 6122:4;6125:11 argued (3) 5958:9,11; 6076:17 argument (1) 6077:1 arithmetic (2) 6002:10;6015:25 Arizona (4) 5982:9;6125:7; 6130:6,13 around (11) 5934:3;5966:6,10; 5970:25;5987:9; 6051:5;6060:19; 6106:6;6108:12; 6115:5;6127:8 array (1) 6001:8 arrive (1) 5968:3 arrived (1) 6092:9 arrow (1) 5981:15 arrows (1) 5954:23 artfully (1) 5976:3 Ashley (2) 5929:5;6078:16</p>	<p>A-S-H-L-E-Y (1) 5929:5 Asian (1) 6095:25 aspect (1) 6099:12 aspects (1) 6054:23 assemble (3) 5942:25;5989:25; 6051:19 assembled (1) 5944:1 assembling (2) 5943:10;6048:12 assembly (2) 5944:5;5980:20 assertion (1) 6058:2 assess (2) 5976:10;5993:9 assessing (1) 5987:18 assessment (1) 5988:13 assets (2) 6021:15;6074:1 assigned (2) 5927:7;5946:1 Assistant (2) 5927:19;5928:3 Associate (5) 5939:11;5973:8; 5977:11,14;6033:25 Association (2) 5929:20,24 assume (8) 6020:25;6035:1; 6038:14;6044:1; 6064:13;6065:19; 6071:21;6112:18 assumed (1) 6010:15 assumes (1) 6007:22 assuming (1) 5980:8 assumption (3) 6073:17;6112:20, 22 assure (2) 5957:5;5992:16 Atlantic (2) 5942:11;6044:8 attempt (1) 6051:19 attempting (3) 5976:4;6002:20; 6109:12 attention (3) 5988:3;6006:6; 6033:5 Attorney (4)</p>
--	---	--	--	---

5927:16;5928:10, 16;5929:6 attorneys (1) 6104:6 attractive (1) 6072:20 attributed (1) 6107:2 Atwater (3) 6080:24;6098:12, 15 audio (4) 5931:4;5932:2,6,8 audit (2) 5986:8,17 audited (2) 5986:7,8 Australia (1) 6069:2 authenticate (1) 5990:9 authenticated (1) 5997:1 authority (1) 5986:8 available (16) 5931:7;5932:2; 5935:4;5940:12,12; 5947:10;5962:10; 5999:22;6010:19; 6015:20,21;6027:13; 6033:16;6038:11; 6068:3;6133:21 average (32) 5954:25;5955:2; 5961:1,23;5962:17; 5963:2,3,4,15; 5964:2,21;5965:3; 5966:20;5967:17,20, 24;5993:16; 6001:23;6045:24; 6055:20,24;6083:16, 18;6092:16;6093:2; 6095:9,13;6110:12; 6112:3;6113:14; 6117:23;6124:18 averaged (3) 5961:6;5963:17, 21 avoid (2) 6040:1;6058:5 awards (1) 6083:1 aware (7) 5935:23;5969:11; 6026:11,14;6031:12, 17;6042:6 awareness (1) 6102:1 away (2) 6048:25;6097:10 awhile (3) 5978:8,12;5990:7	awkward (1) 6027:16 axis (2) 5988:16,16 B Bachelor's (1) 5937:5 back (57) 5927:2;5930:2; 5931:10,13;5932:11; 5950:18;5951:10; 5956:22;5969:23; 5971:13,16;5972:16, 24;5984:11;5986:10, 14;5989:4;5996:17; 6001:19;6002:18; 6008:15;6009:4; 6012:2;6020:2; 6022:1,4;6023:11, 20;6024:16; 6027:21;6028:2; 6031:15;6035:9; 6037:6;6042:15; 6058:16;6059:6,16; 6060:18;6062:1,13; 6067:17,22;6070:2; 6077:22,25;6093:7, 11;6094:3;6110:18, 19,25;6114:4; 6122:17;6124:15; 6131:19;6134:8 background (2) 5938:19;6075:14 back-of-the-envelope (1) 6118:15 bad (1) 6075:9 balance (2) 5992:17;6029:9 balancing (10) 5976:11;6006:19; 6029:2,4,13,14; 6030:9;6057:2,6,17 balls (2) 6124:6,7 band (1) 5982:19 Bao (1) 5929:21 bar (4) 5961:13;6046:22, 25;6047:2 barrels (1) 6067:8 bars (2) 5966:4,7 base (3) 6017:10;6071:4, 18 based (18) 5941:16;5947:12;	5991:17;6021:2; 6023:17;6035:6; 6056:5;6064:17; 6074:1;6092:12; 6094:11;6095:5; 6112:20,22;6113:20; 6115:1;6124:16; 6126:24 baseline (1) 6076:5 bases (1) 6113:18 Basic (4) 5951:1;6063:21, 23,25 basically (9) 5982:6;5989:16, 18;6004:16; 6025:15;6034:1; 6057:19;6096:1; 6105:16 basing (1) 6111:21 basis (26) 5957:2;5968:10, 18,21,23;5969:1; 6012:7;6014:20; 6021:8;6052:4; 6056:2,6;6057:4; 6059:5;6068:6; 6079:6;6088:3; 6096:10;6099:16; 6111:7,23;6112:11, 19;6121:17; 6128:10;6130:9 Bay (1) 5980:9 BD (1) 5996:11 bear (1) 6062:1 bearing (1) 5938:13 beautifully (1) 6090:24 became (3) 5979:5;6030:16; 6080:1 BECKER (2) 5928:9,9 B-E-C-K-E-R (1) 5928:9 become (3) 5932:17;5948:21; 6077:18 becomes (1) 6097:6 becoming (1) 5991:1 Beg (1) 6061:18 Began (1) 6060:20	begin (5) 5935:1;5964:19; 5973:24;6078:21; 6101:17 beginning (3) 5927:13;5935:21; 6089:17 behalf (3) 5929:1;6079:14; 6089:14 behind (2) 5935:2;6017:5 beholder (1) 6025:16 belabor (1) 5974:21 belongs (1) 6089:24 below (7) 5956:7;5957:7; 5958:2;6058:24; 6071:22;6087:18; 6127:3 beneficially (1) 5936:1 benefit (3) 5937:11;6093:9; 6111:4 benefits (1) 6111:21 benefitting (1) 6073:20 Beshore (49) 5928:11,11; 5933:13,14;5934:9, 12,12;5935:9,18; 5975:2,3,4,6,8,10,10, 13;5995:6;5996:21; 5997:17,19,20; 6002:13,20,25; 6003:3,6,23,25; 6004:10,16,24; 6026:24;6043:4; 6057:12,14,15; 6068:11;6122:11,13, 14;6131:12;6132:7; 6133:4,5;6134:2,3,7, 11 B-E-S-H-O-R-E (1) 5928:12 Beshore's (3) 6003:11,20; 6133:8 besides (1) 6100:2 best (9) 5933:4;5977:18; 6014:12;6030:11; 6038:19;6069:6; 6129:5,10;6133:3 bestowed (1) 5977:12 bet (1)	6098:25 better (6) 5930:8;5957:12; 5958:17;6011:2; 6071:9;6129:7 beyond (6) 5960:25;5982:24; 6029:14;6093:1; 6133:19,20 big (5) 5934:3;6066:8; 6094:10;6120:6; 6129:1 bigger (2) 5994:7;6009:22 biggest (2) 6058:21,25 Bill (3) 5939:4;5949:1; 6075:17 billion (3) 5954:4,5,6 binding (2) 5992:3,5 Bishop (1) 5949:6 bit (34) 5930:2;5958:3; 5959:24;5966:10; 5971:13;5972:10; 5974:3;5980:21; 5990:19;5991:19,21; 5992:6,9;6011:13; 6016:20;6017:16; 6028:14;6032:17; 6034:20,20;6039:12, 25;6051:23;6054:8; 6055:6;6069:25; 6070:3,12;6079:8; 6097:18;6100:4; 6128:20;6131:6; 6133:21 bits (1) 6109:7 bizarre (1) 5995:8 blank (1) 5982:6 Blaufuss (1) 6132:10 blended (1) 5956:10 blending (1) 6031:15 blind (1) 6129:13 blindfold (1) 6073:14 block (2) 6096:7;6124:11 blocks (7) 6067:7;6081:22; 6082:8;6096:1,11,
--	---	--	---	---

14;6098:1 blue (2) 6048:17,19 boats (1) 6076:11 bold (1) 5948:20 border (4) 5981:16;5983:2,3; 6061:16 borders (5) 6059:19;6061:9, 10,10,11 borne (1) 6029:1 both (28) 5938:8;5947:16, 20;5948:2;5950:13; 5966:23;5979:17; 5980:21;5986:16; 5988:10;5992:21; 6017:20;6026:7; 6029:24;6046:6; 6054:1,23;6055:2; 6068:25;6082:7; 6084:3,7,9,10; 6085:20;6086:17; 6103:22;6106:12 bottom (8) 5953:4;5961:17; 5983:1,1;5991:16; 5992:24;6045:19; 6071:8 bought (4) 6081:23;6101:17; 6106:20;6130:8 boundaries (2) 5983:10;6026:3 boundary (1) 6019:18 box (5) 5961:9,11,12,15; 5989:1 box-and-whisker (1) 5961:12 box-and-whiskers (1) 5989:1 boxes (4) 5931:11;5961:15; 5980:8,8 boy (3) 5929:21;6004:15; 6033:3 brackets (1) 5931:25 branch (1) 6072:7 brand (2) 6082:4;6096:7 branded (14) 6015:21;6082:7; 6084:24;6085:3,23; 6114:4;6119:13,14;	6120:6,12,18; 6129:7;6130:2,4 branding (6) 6014:15,20,24,25; 6015:10,14 break (17) 5965:8;5970:23; 5971:13,15;5994:18; 6010:4;6027:4,6,6,8, 9,12,15,22;6077:16, 20,24 breakdown (2) 6054:6,7 breakout (1) 6054:14 breaks (1) 6054:9 Brian (1) 5927:15 B-R-I-A-N (1) 5927:15 Bridgett (1) 5928:17 B-R-I-D-G-E-T-T (1) 5928:17 Briefing (1) 5952:20 briefly (3) 5933:16;5974:12; 5989:4 bring (3) 5933:6;6044:9; 6133:21 bringing (1) 6001:2 brings (1) 5992:10 broadcasting (1) 5931:4 broader (2) 6020:11;6034:20 brought (4) 5933:7;5967:9; 5994:17;6077:13 build (3) 6031:3;6082:17; 6104:21 building (2) 6002:5;6079:24 built (11) 5985:8;6009:1; 6014:25;6015:3; 6025:4;6035:18; 6067:10;6081:18; 6104:18,19;6105:3 bulk (5) 5973:14;6066:23, 24;6067:4;6109:18 burdens (1) 6057:18 burdensome (1) 5934:3 business (22)	5932:5;6028:13, 14,25;6079:1,13; 6088:13;6096:3,5; 6098:22;6099:8,10; 6101:3;6104:13,17; 6105:5,21;6108:19; 6109:11;6114:12,17; 6126:5 butter (5) 5976:9;6021:21; 6029:25;6038:12; 6084:18 butterfat (2) 5942:4;6041:16 buy (21) 5959:25;6088:2; 6096:11;6097:12,13; 6099:11;6103:15; 6106:22,23,24; 6108:13;6116:2; 6118:20;6119:24; 6121:1,25;6124:12, 13,19,24;6130:13 buyer (1) 6042:10 buyers (1) 5956:1 buying (9) 5959:25;5960:2; 6006:8;6108:14; 6109:4;6113:23; 6114:1;6118:17; 6124:14 byproduct (1) 6004:7	5952:12,18;5953:18, 21;5954:4,12,13,14, 16;5956:24;5958:8, 9,11;5969:10,14,20; 5970:16;5980:6,24; 5993:25;5994:1,14, 22;5995:13,18,24; 5998:11,15;6014:5; 6015:8,10;6016:2,8, 10,24;6017:22,23; 6018:3;6023:7; 6026:12;6032:2,18, 19;6033:16;6034:2; 6036:2,6,8,16,22; 6037:3,8;6038:10, 11,24;6044:19; 6045:5;6048:17; 6052:14,15,18; 6058:22;6060:13; 6065:13;6068:13,14, 19;6069:17; 6072:11;6078:17; 6080:11,16,24; 6082:6,23;6084:3, 13,17;6086:6,22; 6087:12,15,21; 6088:5,6,9;6089:1, 10;6090:20;6092:11, 19;6093:6,10; 6094:12;6095:2; 6096:15;6098:12; 6102:3,5,23; 6111:14,18,19,22; 6112:9;6119:24; 6120:5,17,18; 6121:11;6122:3,7; 6125:7,21;6126:16, 18;6127:7;6128:11, 23,25;6130:12; 6131:5 California's (5) 5941:8;6050:22; 6086:10;6087:25; 6117:23 call (11) 5945:7;5955:16; 5982:8;5991:1; 6004:8;6023:17; 6053:1;6097:19; 6107:10;6130:7; 6132:22 called (6) 5961:12;5978:16; 5983:16;6006:6; 6011:23;6109:23 calls (1) 5986:4 came (5) 5967:4;5977:7; 5978:17;6121:6; 6131:4 can (139) 5930:8;5931:4,8;	5933:4;5940:20; 5941:3;5942:4,14, 22;5944:17,18,24; 5945:1;5946:7; 5947:1,3,4,10; 5948:10;5951:13; 5956:21;5958:5; 5966:24;5967:13,15, 22;5969:23; 5970:10;5974:12,13; 5975:25;5978:13,24; 5979:25;5980:6,14; 5982:16;5985:4,11; 5986:9,15;5987:4; 5990:9;5992:3,6; 5995:2;5996:11; 5998:4,9,9;6001:11, 11,12,22;6006:14; 6009:1,5,12,23; 6010:17;6014:5,20; 6016:1;6017:14; 6018:4;6019:4; 6020:4,4,15;6021:9, 9;6023:10;6025:9, 11;6027:11,14; 6029:20;6030:11; 6033:23;6034:5; 6037:23;6039:5; 6040:14;6045:9,23; 6046:15;6047:1,4; 6048:7,8,9,20; 6049:6;6053:15; 6055:11,12,15; 6065:23,23;6067:8; 6074:1;6075:20; 6077:2;6079:7,8; 6080:14;6084:9; 6086:9;6088:19; 6092:9;6094:21; 6099:4;6103:1; 6106:19;6107:1,4; 6109:18;6111:13; 6113:4;6114:8; 6120:6;6121:1; 6122:25;6123:22; 6124:3,20;6125:8; 6126:8;6128:4,5,8,9, 10,15;6130:8; 6133:1,3,15,17 capable (3) 6049:20,22; 6050:3 capacitate (3) 5944:19;6049:23; 6066:7 capacities (2) 5944:20;6009:2 capacity (16) 5960:5,6;5980:16; 6008:24,25;6009:18; 6035:22;6037:8; 6049:18;6050:8; 6051:24;6066:1;
			C	
		calculated (7) 5941:16;5943:2,6; 5954:19;5965:4; 6040:9,20 calculating (2) 6074:25;6075:17 calculation (7) 5955:3;6000:23; 6001:3;6016:1; 6052:5;6074:25; 6092:24 calculations (4) 5941:13;5943:4; 6001:6;6118:15 calendar (1) 6035:6 calibrated (1) 5957:6 calibrating (1) 6076:25 California (134) 5927:4;5928:13; 5929:7,9,19,23; 5938:4,15;5940:11; 5950:11,18;5951:17;		

6089:12;6108:11,15; 6123:20 capita (7) 5941:12,16; 5954:1,3;6032:22; 6033:15,19 capital (2) 5931:25;5970:5 Capitol (1) 5973:21 capture (3) 5958:14;5970:2,5 captured (8) 5932:6;5935:16; 5958:10;6044:7; 6062:19;6065:17; 6067:20;6074:12 captures (1) 6043:22 care (3) 6029:8;6059:21; 6129:12 career (1) 6028:22 carefully (1) 5970:18 Carman (2) 5927:18,18 C-A-R-M-A-N (1) 5927:18 carry (3) 5957:12;5970:10; 6014:20 carrying (1) 5934:3 case (17) 5931:23;5944:16; 5964:12;5985:10; 5993:7;6017:18; 6028:21;6042:6; 6061:5;6062:25; 6070:17;6071:6,19, 24;6075:5;6094:24; 6117:20 casein (5) 6039:5,8,15,18,23 caseinates (2) 6039:5,11 cases (9) 6014:14,17; 6042:20;6049:20; 6057:3;6068:18; 6069:11,20,22 cat (1) 6046:16 catch (2) 5971:8;6071:9 categories (20) 5934:25;5941:1,1; 5979:4;5990:21; 5991:7;5999:12; 6000:24,25,25; 6004:17,19;6006:18;	6009:13;6010:7,24; 6013:1,4;6042:24; 6054:15 categorize (1) 6035:12 category (15) 5934:20,21; 5946:20;5959:5,6; 5968:9;5991:9; 5999:16,19,25; 6002:8;6011:25; 6012:19,20;6039:8 cats (3) 6132:20,22,23 Cattle (5) 6079:1;6097:5; 6101:3;6103:22; 6107:14 caught (1) 5970:12 cause (5) 5969:21;6023:8; 6024:3;6087:14; 6093:16 caused (4) 6058:3,5,10; 6093:17 causes (1) 6039:11 caution (1) 5969:15 CDFA (5) 6001:7,7;6103:17; 6116:21;6117:12 census (1) 5940:14 cent (4) 5950:17;5952:21; 5994:13;6023:20 center (4) 5954:22;5958:7; 6016:10;6098:17 Central (19) 5928:4;5950:11, 18;5951:17; 5952:12;5957:20; 5961:12;5993:25; 5994:14,22,22; 5995:12,18,24; 6016:2,8,10; 6044:19;6045:5 centroid (2) 5954:24;5955:3 centroids (1) 5954:23 cents (60) 5950:10,20; 5951:16;5952:13,16; 5957:22;5962:15,16; 5963:4,5,20,22,23; 5964:3,3,4,6,17,17, 22,22,23;5965:4,14, 14;5966:1,7,10,13;	5988:13,20;5995:23, 23;6016:3,7; 6017:23;6024:2; 6046:22;6047:1,2,3; 6056:11;6083:5,11, 16,19,20;6092:7,16; 6093:2,2,3,25; 6094:3;6095:13; 6110:12;6117:13; 6120:22;6121:6; 6125:13 certain (11) 6035:18;6040:3,4; 6046:18;6056:9; 6071:3;6072:4,4; 6102:13,20;6111:15 certainly (25) 5934:9,18,22; 5935:2;5937:17; 5956:16;5967:12; 5979:25;5990:11; 5995:10,22;5996:14; 6011:20,21;6020:24, 25;6030:20; 6031:20;6045:10; 6055:21;6072:1; 6081:7;6084:2; 6092:20;6126:13 ceteris (1) 5950:21 chain (4) 5943:23;6007:21; 6014:11;6021:8 chains (1) 6082:6 chair (1) 6078:1 challenged (2) 5938:25;6024:15 challenges (2) 6031:13;6118:25 challenging (1) 6029:12 chance (2) 5944:25;6086:15 change (17) 5954:8,13,18; 5955:3,4;5971:5; 5979:1;6024:24; 6025:6;6088:12; 6093:5;6094:11,11; 6095:1;6102:8,10,12 changed (6) 5979:2,2;6007:15; 6061:3;6074:4; 6106:2 changes (24) 5947:19;5949:3; 5953:11,15;5954:11, 20;5973:25; 5974:19;5975:24; 5978:21;5979:9; 5990:18;5991:6,16;	5993:1,2;6024:7; 6026:16;6032:8; 6092:18,23;6093:15; 6095:1;6105:15 changing (2) 5993:10;6115:8 channels (1) 6030:7 characterize (1) 5958:25 charge (1) 6085:7 charged (2) 5958:14;5988:11 charges (2) 6086:2;6094:18 charging (1) 6128:12 Charles (1) 5952:18 chart (4) 5967:9;6004:9; 6053:4;6128:21 Chateaugay (1) 6019:5 cheaper (1) 6122:4 cheat (1) 5930:23 check (2) 5986:14;6050:15 cheddar (8) 6010:24;6011:1,2, 5,11,13;6015:19; 6129:11 cheddars (1) 6081:21 Cheese (315) 5929:13,14,15,17; 5937:22;5938:17; 5941:4,5;5942:1; 5943:13;5944:13; 5946:10;5947:17; 5948:4;5950:1,14, 19,21;5951:4,8,19; 5952:6,22,24,25; 5953:3;5957:4,17; 5958:6,16;5959:3, 12,16,19;5960:1,4,7; 5961:10;5962:18; 5963:1;5965:7,24; 5966:12,14,20; 5968:4;5969:20,22; 5970:4,8,10,11; 5979:24;5981:4,7,8; 5982:12,14,21,23, 25;5984:6;5985:1, 13;5988:9,12; 5992:4;6001:8; 6003:1,7,17,18,21; 6004:2,7;6008:18; 6010:22,23,25,25; 6011:2,7,25;6012:1,	13,14,24;6013:25; 6014:2;6015:7,8,20; 6016:11,11,24; 6017:4,14;6018:5, 11,12,25;6023:8,9, 21;6024:8,24; 6028:6;6029:25; 6030:16,17;6031:10, 24;6032:1,3;6033:5, 19;6034:14,15,22, 23,23;6035:1,1,2,2,7, 8,21,22;6036:2,3,19, 21;6037:4,10; 6038:10,11,22,24; 6039:15,18,19,19, 23;6040:9,10,12,23; 6041:6,22,23; 6042:4,9;6043:13, 14,17,23;6044:14, 16,21;6047:8; 6049:14;6051:16,19; 6052:2,9,24; 6054:22;6057:7; 6058:8;6060:10,21, 23;6061:3,23,24; 6062:2,15,15,18,20; 6063:4,8;6064:1,4,4, 9,12,14,17,19,19,20, 25,25;6065:10,20, 22;6066:2,9,13,17, 19,23,24;6067:4,5, 15;6068:2;6070:17; 6072:2,21;6073:9, 10;6080:25;6081:2, 16,17,17,18,19,21; 6082:4,5,5,7,8,19,19; 6083:4,4,10,11,17; 6084:3,7,13,22,23; 6085:22;6086:16,19, 23;6087:15;6088:4, 14,15,16,19,20; 6089:11;6092:6,13, 14,16;6095:18,20, 22;6096:25;6097:6, 21;6098:1,5;6099:7, 24;6100:3,24; 6101:3,6;6102:2; 6103:21;6104:12,18, 19,22;6105:3; 6106:13,16;6107:2, 5;6109:8,13; 6110:11;6112:7,14; 6113:4,8,19;6114:4, 5,6,7,10;6116:17; 6117:3,12,19; 6120:6,23;6121:21, 23;6123:21;6124:4; 6125:4,6,21; 6126:11,15;6128:11, 16,22,24;6129:7,10; 6130:8 cheeses (10) 6011:4,14,16,18,
---	--	---	--	--

20;6052:8,8;6088:2; 6098:2;6106:25	clarify (1) 6128:5	5970:21;5971:5,9, 16,22;5972:4; 5974:25;5975:2,4,7, 9,11;5976:25; 5977:4,8,16; 5981:13,24;5984:12, 14,16;5988:3; 5995:3;5996:1,6,14, 20,23;5997:3,10,17; 6002:13,22;6003:2, 4,8,14,23;6004:3; 6026:24;6027:5,12, 15,20;6028:2; 6031:20;6033:4,9, 11;6047:15,20; 6056:16;6057:11; 6061:8,17;6068:21; 6069:6,14;6070:6; 6077:6,12,15,21,25; 6078:6,11,14; 6083:6,12,20,22; 6084:5;6085:2; 6089:19,21;6090:2, 7,10,14,21,24; 6091:6,18;6098:11, 18,21,25;6099:6,17, 20,22,25;6100:2,5,8, 14,23;6103:24; 6115:13,16,18,23; 6116:1,7,12;6118:2; 6122:11;6123:8; 6127:14,16;6130:16, 23;6131:1,7,11; 6132:21,23;6133:8; 6134:1,6,10,12	Coast (24) 5942:11;5951:24; 5969:17,17;6014:7, 7;6016:17;6044:7,9, 16;6045:12,15,15; 6067:17;6086:4,8, 11,24;6090:12; 6125:8;6128:3,7,16; 6129:24	Committee (2) 6075:20,21
Chevy (1) 5972:15	clarifying (1) 6036:10	co-counsel (1) 5928:18	commodity (2) 5970:9;6053:19	
Chicago (17) 5950:11;5951:17; 5952:13;5978:10; 5989:9;5994:11,15; 5995:21,23;6016:3, 8,11,12,18,20; 6017:22,24	clarity (1) 5988:5	code (1) 6098:16	common (6) 5934:18;5975:21; 6031:1;6042:14; 6057:5;6065:10	
childhood (1) 6081:17	Class (75) 5938:25;5939:10, 16;5949:3,7,14,19; 5950:9,25;5952:19, 19;5955:9,14,18; 5956:9,25;5957:14, 16,17,18;5958:1,1; 5969:19;5993:1,21, 22,23;5994:14; 5995:13;5996:10; 6018:19;6020:12; 6021:18;6022:14,15, 15;6023:6,14; 6029:14,16;6033:14, 14,18,21,25;6043:6, 10,11,12,13,17; 6047:7;6059:17; 6062:17,20;6063:11, 18;6068:4,6; 6070:15,24,24,24; 6071:11;6082:21; 6086:14,18,20; 6092:11,12;6119:1, 2;6121:9,11,15	colleague (4) 5989:11,15,20; 6127:22	commonplace (1) 6042:8	
chip (5) 5928:24;5932:15; 5971:23;5972:16; 6039:24	classes (1) 5955:19	collect (1) 6051:25	companies (3) 5987:21;6082:23; 6129:14	
C-H-I-P (1) 5928:24	classified (2) 5955:17;6059:16	collected (3) 5986:13;6042:9; 6059:15	Company (11) 5930:19;6054:23, 23,24;6055:3; 6079:1;6095:18; 6100:25;6103:22; 6123:16;6129:1	
choice (3) 6027:20;6066:5,6	clear (7) 5957:1;5995:15; 6048:7;6054:10; 6069:24;6070:14; 6104:9	collecting (2) 6069:11,11	Company's (1) 6101:3	
choices (1) 6027:6	clearing (6) 5956:7,14; 5969:18;6024:20; 6025:19;6071:22	collection (1) 6061:13	comparable (2) 6062:12;6120:12	
choose (12) 5944:22;5946:18; 5982:14;5999:13; 6001:1;6007:8,9; 6009:23;6017:14; 6029:2;6051:16; 6110:14	Clerk's (1) 5931:24	collective (1) 6021:3	compare (7) 5947:10;5985:12; 6016:10;6017:12,16; 6051:13;6052:20	
chooses (1) 6050:8	Clifford (1) 5927:18	color (3) 5982:20;6019:13, 17	compared (3) 5948:5;6028:25; 6082:23	
chose (5) 5950:12;6016:20; 6068:3;6073:5; 6074:22	CLIFTON (161) 5927:2,6;5930:4, 14,20;5931:20; 5934:11;5935:9; 5936:13,17,22; 5937:1,8,17;5938:2; 5944:23;5945:6; 5949:11,16;5951:5, 10,20;5952:2; 5959:23;5960:8; 5962:1,5;5964:5,8, 10,13,19;5965:16; 5966:3,14;5967:2,8, 25;5968:12;	Colorado (1) 5998:21	comparing (4) 6016:4,24;6017:1; 6034:18	
chosen (2) 6049:23;6066:1		colors (2) 6048:16;6049:3	comparison (1) 6061:1	
Chuck (3) 5989:11,15,20		combination (4) 5943:10;5955:24; 5956:8;6048:12	comparisons (2) 5951:21;5986:9	
churn (1) 5942:4		combined (1) 5939:2	compensation (1) 6057:20	
circle (1) 6018:4		comfortable (2) 5986:20;6009:3	compete (8) 5970:8;6060:12; 6071:4,17;6088:20; 6096:7;6129:6,6	
circles (1) 5961:19		coming (22) 5946:12;5981:3; 5985:6;5996:18; 6028:9;6036:3; 6040:18,23;6041:6; 6048:1;6076:8; 6077:5,21;6099:10, 10;6116:11; 6123:15;6127:20; 6128:6;6133:11; 6134:5,8	competes (1) 6071:2	
circumstance (1) 6058:16		comment (4) 5929:10;5984:18; 6057:16;6075:22	competing (4) 6017:3;6072:11, 14,17	
circumstances (1) 6030:13		commentary (1) 6118:24	competition (5) 5929:11;6026:2; 6058:22;6060:11; 6121:2	
cite (1) 6025:9		comments (3) 5938:13;6057:17, 22	competitive (13) 5950:21;5951:23; 5957:3;6008:4,9; 6016:16,18;6060:4, 5,9;6068:12,15; 6126:10	
cities (1) 5942:10		commercial (3) 6066:18;6067:18; 6082:8	competitively (2) 5955:16;5956:1	
City (6) 5928:4;5987:3; 6044:24;6045:14; 6078:13;6080:1			competitiveness (1) 6017:20	
claim (1) 5932:20			complained (1)	
clarification (3) 5949:18;6065:19; 6104:23				

5958:13 complaints (1) 5971:10 complete (13) 5939:6;5944:19; 5958:23;5985:18,20; 5986:1,2,6,19,25; 6051:16,21;6088:12 completed (4) 5958:24;5985:17; 5986:4;5996:17 completely (3) 6014:11;6077:2; 6132:12 completeness (1) 5986:16 complex (2) 6082:3;6100:11 component (11) 5941:7,8;5966:15, 18;5992:4,9; 6029:17;6036:1; 6039:25;6043:16; 6047:7 components (10) 5940:24;5942:2; 5943:17;5992:11,15; 6040:1,2;6064:21, 23;6092:12 composition (9) 5940:7,11; 5991:19,24;5992:1, 11;6041:3,5,10 composted (1) 6082:16 comprehensive (2) 5940:23;6080:9 comprised (1) 5973:13 computational (1) 5940:16 computer-run (1) 5946:5 concentrate (9) 5968:22;6046:2; 6048:5;6081:24,25; 6088:24;6096:21; 6115:19,20 concentrated (2) 6097:7;6116:4 concentrates (2) 5990:24,25 concentrating (1) 5962:23 concentration (7) 5963:3,13,15; 5998:10;6000:8; 6055:24;6116:1 concepts (1) 6088:23 Conceptually (2) 5948:10;6016:14 concern (2)	5956:13,24 concerned (3) 5934:2;6024:3; 6089:9 concerns (2) 5970:15;6023:19 conclude (2) 5985:19;6045:21 concludes (1) 6089:15 concluding (1) 6023:4 conclusion (4) 5955:10;5983:5; 6031:7,8 condensed (1) 5941:2 conditions (7) 6024:4;6026:14; 6058:13;6074:4; 6076:14,14;6087:15 conduct (1) 5939:9 conducted (1) 5963:10 confidence (2) 5947:21;5961:23 confident (1) 6019:18 confirm (1) 5995:7 confused (1) 6129:17 confusion (1) 5966:25 Congress (10) 5939:1;5973:21, 23,24;5974:6; 5975:23;6074:22,23, 24;6075:25 Congressional (2) 5974:6;6075:19 Congressman (2) 6075:22,23 conjunction (1) 6057:7 connected (1) 5973:2 connecting (1) 5942:19 connects (1) 5942:17 conscious (1) 6110:24 consequences (3) 5976:22,22; 5977:20 Conservation (1) 6099:18 consider (6) 5948:13,15; 5985:23;6006:21; 6044:11;6125:22	consideration (2) 5934:24;5949:3 considered (7) 5955:12;5970:18; 5998:5;6019:11; 6035:15;6053:13; 6055:15 considering (1) 5969:16 consistently (1) 6096:17 consists (1) 5927:8 consolidation (2) 6061:12;6111:12 consolidator (1) 6040:15 constrain (1) 5944:18 constrained (1) 5941:24 constrain (10) 5943:16;5992:3,5; 6008:24;6009:18,19; 6036:25;6037:14; 6049:18,25 Constraints (6) 5943:13,13; 6008:17;6009:17,18; 6026:4 constrained (2) 5944:17;6030:18 construction (1) 5985:5 consult (2) 5973:10;6099:6 Consultant (2) 5928:22;6078:25 consulting (3) 6079:13;6098:19, 22 consume (2) 6007:9;6035:17 consumed (2) 5940:8;6036:22 consumer (9) 5939:25;5941:4; 5943:11;6007:21; 6036:2;6043:25; 6066:18;6067:4; 6121:24 consumers (7) 5939:23;5940:3; 5943:18;5956:15; 6007:9;6044:1,2 consuming (2) 6014:22;6066:14 consumption (13) 5941:6;5954:1; 6012:1,1,5,8;6032:7, 23;6033:15,19; 6036:6;6038:10; 6067:9	contact (1) 5975:23 contacted (1) 5973:23 contacts (1) 6051:20 contain (1) 5943:17 content (1) 5963:14 contiguous (2) 5940:15;6032:8 continue (3) 6080:13;6081:10; 6085:24 continuing (2) 5947:7;6051:24 contract (2) 5987:12;6057:3 contracted (3) 5939:8;5948:24; 6095:5 contracts (1) 6099:11 contrast (1) 6128:23 contribute (1) 6096:16 control (1) 6026:1 controversial (1) 5987:1 controversy (1) 5970:2 convenience (1) 6110:23 conveniently (1) 5935:4 conversation (4) 5933:13;5972:10; 5974:3;6125:18 conversations (2) 6127:5;6133:3 conversion (1) 6028:11 convert (2) 6042:4;6066:3 converters (3) 6066:25;6067:1,4 converting (2) 6003:7;6066:23 convinced (1) 5970:17 cooked (1) 6124:10 cooled (2) 5967:21;6116:8 cooling (4) 5962:22;6053:2, 12,24 co-op (2) 6106:22,24 cooperative (27)	5956:21;5959:15; 5969:23;5999:21; 6010:5;6023:10; 6024:9,25;6025:2,7; 6028:14,17,24; 6029:22,24;6030:1, 8,10,18;6057:5,19; 6081:12;6088:4; 6092:7;6101:16; 6112:7;6122:8 cooperatively (1) 5956:20 cooperatively-owned (1) 6030:21 cooperative-owned (1) 6028:12 Cooperatives (21) 5928:22;5969:11; 5987:12,20;6025:4; 6028:20;6029:1,9, 12,18,24;6030:2,15, 23;6031:12;6057:1, 2;6058:2;6103:15; 6104:7,19 Cooperatives' (8) 6083:18;6084:12, 20;6087:11;6088:7, 10;6110:12;6113:18 co-ops (1) 6056:21 coordinated (2) 6014:11;6021:8 coordinates (1) 5955:4 copies (5) 5931:10;5933:9; 5934:7;5935:10; 5936:9 co-product (3) 5970:4;6003:19; 6064:12 copy (6) 5936:10;5950:4; 5971:6;5989:13,16; 6051:7 copying (1) 5934:4 core (1) 5939:20 Cornell (10) 5937:6;5939:8,11; 5948:24;5962:8,10; 5972:23;5977:13,14; 6022:24 corner (3) 5995:15;6073:25; 6076:6 Corona (1) 6112:12 corporation (1) 6028:15 Correction (1) 6121:20
--	--	---	--	--

<p>correctly (2) 5993:16;6108:19 correlation (3) 5947:14;5984:23, 24 correlations (2) 5947:17;5984:21 cost (107) 5934:4;5939:24; 5942:25;5944:14; 5945:10;5946:1,10, 19,21;5948:14,16, 17;5960:23,24,25; 5961:25;5962:7,9, 12,14;5963:2,19; 5964:4,6,14,18,23; 5965:3,12;5966:3,4, 11,23;5967:9; 5970:10;5988:10,19, 22;5993:17; 6007:23;6008:12; 6014:13;6029:1,13; 6030:24;6031:24; 6032:10,12;6033:15; 6034:14;6035:13; 6036:24;6037:15; 6038:3;6040:9,21, 24;6048:12,12; 6049:15;6050:20,21, 24;6064:22; 6065:12;6066:7; 6067:19;6074:19; 6075:24;6076:19,24; 6082:16;6083:4,4,9, 17,23;6086:13,25; 6088:3,18,19; 6089:10;6092:6,14, 15;6110:11;6112:3; 6113:4,5,8,8,15; 6116:20;6117:5,9, 12,16,17,24,24; 6119:24;6125:16; 6126:4,7,10;6129:2 Costco (2) 6082:6;6129:13 costlier (1) 5992:5 costly (1) 6093:20 Costs (75) 5942:16;5943:3,4, 5;5947:20;5948:21; 5953:9,12,14,15; 5957:2;5958:6; 5963:10,12;5965:10; 5966:19;5967:23; 5969:8;5974:15,17; 5976:8,9;5987:14, 18,22,22;5988:9; 5989:3,3;5992:25; 5993:2,10,10; 6002:6;6005:18; 6008:1,1,2,3,5,20;</p>	<p>6031:15;6037:17,21; 6040:21,25;6046:18, 21;6050:14,19,20, 23,25;6051:2; 6055:14;6057:18; 6064:6,15,18; 6065:14,16;6075:18; 6086:9,23;6087:24; 6088:8,18;6094:6; 6108:15;6116:23; 6117:22,25;6128:2, 8,16 Cottonwood (2) 6080:25;6082:14 Council (3) 5930:1;6070:11; 6118:8 Counsel (5) 5927:16;5928:10, 12;5935:11;6091:24 counties (1) 5940:15 countries (5) 6069:1;6082:7; 6086:19;6087:8; 6095:25 country (47) 5938:16;5939:1; 5943:3;5954:9,12; 5955:20;5957:4,7, 11;5958:18;5984:1; 6003:22;6009:9; 6023:13,22;6024:10, 25;6044:6,13; 6050:22;6051:20,24; 6059:14;6063:16; 6065:2,6,13,21; 6066:25;6070:19; 6071:1,14,17,25; 6072:12;6073:10,19; 6074:7;6075:7,25; 6076:13,23;6086:21; 6087:17;6095:21; 6109:15;6128:22 county (7) 5940:10,13; 5954:9,20;6032:7; 6098:12,13 County-level (1) 5941:15 couple (12) 5931:22;5932:16; 5992:25;5997:23; 6035:24;6049:5; 6062:24;6090:25; 6103:5;6114:19; 6116:16;6118:9 course (8) 5942:5;5991:13, 14;6005:23;6030:7; 6034:7;6056:19; 6101:22 court (4)</p>	<p>5931:6;5937:11; 6027:2;6079:8 cover (2) 5972:6;6128:8 covered (4) 5987:23;5998:3; 6045:10;6080:7 covers (4) 5965:17;5982:7; 6052:3,4 cows (17) 6056:19;6074:5; 6081:3,4;6084:1,23; 6094:13;6101:6,8, 12;6102:2;6104:17; 6105:2;6114:3,5,6; 6118:13 craft (1) 6013:21 crafted (1) 6074:22 cream (25) 5941:2,4;5942:4,4, 5,6;5944:10; 5946:12;5962:19; 5991:17;6041:15,16, 21;6042:5,9,10; 6048:23,24;6053:17; 6079:2;6097:19,21, 22,25;6107:10 create (5) 5976:19;5982:15; 6008:17;6035:12; 6037:17 created (4) 5977:7;5995:8; 6003:21;6034:25 creating (2) 5992:14;6040:1 credits (1) 6132:19 critical (1) 5984:3 crops (1) 6085:6 cross-border (1) 6034:8 crossbred (1) 6114:6 cross-checks (1) 5986:15 cross-examination (17) 5970:23;5971:18; 5978:4;5997:18; 6028:4;6047:22; 6057:13;6061:20; 6070:8;6091:20; 6100:18;6104:1; 6116:14;6118:4; 6122:12;6123:10; 6127:23 cross-examine (1) 6122:14</p>	<p>cross-state (1) 6034:7 curd (1) 6124:11 curiosity (1) 6016:9 curious (1) 6124:3 current (17) 5938:16;5940:25; 5956:24;5958:17; 5966:19;5969:19; 5977:1,2;5993:18; 6014:19;6023:6,6, 14;6070:23;6088:6; 6108:10;6112:9 currently (12) 5938:5;6050:10; 6072:16;6085:8,10; 6086:2;6089:1; 6094:21;6103:4,4; 6116:25;6126:16 customers (3) 6121:10;6126:7,8 Cut (6) 6066:24;6067:13, 16;6085:23; 6096:11;6114:4 cycle (1) 5974:3 cyclical (1) 5975:22 D daily (3) 6021:7;6079:6; 6099:16 Dairies (3) 5928:13;6081:3; 6099:8 Dairy (139) 5927:19,22,24; 5928:1,5,8,13,20; 5929:7,9,13,13,20, 24;5931:9;5932:18; 5937:5,24;5938:2,7, 8;5939:2,7,8,12,13, 14,18,21,22,23; 5940:7,22,24; 5941:3,6,12,13,18, 20;5942:13;5943:1, 2,11,14,17,23,24; 5946:17,22;5947:11, 12;5948:24;5949:2, 21;5953:16,24; 5954:2,4;5955:7,24; 5969:10,20;5970:2, 16;5973:2,5,9,10; 5974:15,24,25; 5975:15,24;5976:11, 14;5977:2,5,13,15, 25;5978:2,17;</p>	<p>5979:5;5985:13,13; 5989:9;5991:2,23; 5993:9;5994:18; 5996:4;6006:8; 6007:8;6009:10,15; 6012:11;6018:10; 6021:5;6023:7; 6029:21;6034:8; 6035:17;6038:4; 6044:4;6056:22; 6057:6;6059:14; 6062:14;6063:10; 6069:10;6075:10,11; 6076:12;6078:16,25; 6079:24;6080:9,25; 6081:2,11;6082:14; 6084:3,7,11; 6085:16;6088:8,22; 6090:19;6102:17; 6104:6,10,16,24; 6114:17,20;6120:14; 6128:9;6132:7 dairymarketsorg (3) 5952:21;5962:11; 5996:4 <small>dairymarketsorg/CA/CLI0314bnp (1)</small> 5996:8 DairyMarketsorgCA (1) 5947:2 dairymen (1) 6084:2 Dakota (2) 5995:16;6079:25 Data (59) 5940:5,6,6,12,14, 14,19,22;5941:11, 18;5944:1;5947:10; 5949:20;5950:9; 5952:4,14;5953:12; 5967:4,5;5978:11, 24;5979:1,13; 5982:22,24;5983:9, 13;5984:9;5985:25; 5986:2,7,9,16,19; 5987:25;5989:25; 5990:3,14;5991:7,8, 12,15;5993:19; 6007:14;6009:18,25; 6012:11,25;6020:6; 6032:1,5;6035:20; 6042:19,21;6052:1; 6055:10;6061:1,6; 6067:12 date (3) 5958:20,22; 6102:20 dates (2) 5965:17,18 Davis (2) 5928:25;5929:6 Day (23) 5927:4;5929:2; 5931:14,19,21;</p>
---	---	---	--	---

5932:23;5933:24; 5959:4,6,7,9,11,21; 5960:14,16,19; 5963:18;6000:1,15; 6027:14;6054:3,19; 6123:19 days (9) 5927:9;5929:4; 5986:11;6029:5,7; 6056:18,20;6110:16; 6115:6 day-to-day (1) 6096:10 DC (1) 5929:1 D-e (1) 5929:12 deal (7) 5948:4;5981:7; 6001:23;6003:5; 6085:14;6099:14; 6122:21 dealing (3) 6065:9;6070:18; 6101:14 Dean (1) 6132:16 decade (3) 5954:10,10,24 decades (1) 5955:1 decided (4) 6076:19;6104:21; 6105:2;6111:15 decimal (1) 6005:1 decision (16) 5935:14;5938:14; 5939:16;5955:8; 6007:20,23;6021:6; 6022:12,17;6028:17; 6035:12,16;6074:24, 24;6110:25;6119:21 decisions (11) 5933:21;6021:1,7, 9,13;6035:15; 6037:17;6073:1,16; 6074:1,12 declined (1) 5938:22 declining (1) 6076:14 deduce (1) 5969:7 define (1) 6053:15 defined (1) 6025:24 defining (1) 6025:24 defraying (1) 6108:15 degraded (1)	6087:23 degree (6) 5937:5;5947:9,21; 5976:5;6000:17; 6037:2 degrees (1) 6076:15 dehydrate (3) 6040:13,13; 6065:10 dehydrating (1) 6041:11 DeJONG (2) 5929:12,12 deliberations (1) 6075:16 deliver (1) 5963:3 delivered (1) 6044:11 demand (51) 5939:25;5940:22; 5941:12,14,16,17, 19;5942:18;5943:12, 18;5944:8,9; 5947:19;5948:20,21; 5953:9,16,24; 5954:3;5955:22; 5970:2;5980:17; 6018:10;6029:11,16; 6032:25;6034:3; 6036:2,13,16,17,18, 18;6038:21;6043:24, 25;6044:11;6045:7; 6049:8,10;6069:24; 6070:2;6072:4,5; 6086:9;6096:8,8,13, 18;6122:22;6128:4 demanded (1) 6029:6 demanding (1) 6128:7 demands (3) 5941:15;6008:19; 6122:20 demonstrate (1) 5948:3 demonstrates (2) 5950:15;5954:25 Department (5) 5931:25;5973:16; 6022:23,24;6074:16 depend (1) 6132:1 dependent (1) 6074:11 depending (1) 6093:3 depends (1) 6043:12 depicted (1) 6015:14 depool (4)	6087:10,11; 6111:23;6112:2 depoled (1) 6113:11 depooling (8) 6031:15;6087:12; 6088:9;6090:20; 6111:4,5,13,21 depress (1) 6073:10 deprived (2) 6086:4;6090:13 Deputy (1) 5927:19 derived (2) 6033:23;6039:10 derives (1) 5938:19 describe (10) 5936:2;5937:2; 5961:11;5980:5,7, 12;5998:4,18; 6026:6;6096:24 described (3) 6006:24;6007:19; 6100:10 describes (4) 5943:22;5959:1, 12;5988:7 describing (1) 6004:1 Descriptive (1) 5958:21 designed (2) 6040:1;6096:6 desired (1) 6039:19 desk (1) 6031:19 destination (5) 5961:7;5962:15, 16,17;6044:13 detail (8) 5928:4,8;5946:25; 5954:21;5972:12; 5980:11;6006:14; 6055:4 detailed (1) 5939:19 details (1) 6005:25 determinant (1) 6008:11 determinants (2) 5948:22;5953:10 determine (7) 5941:11;5968:7; 6001:12;6032:6; 6056:4;6093:15; 6123:4 determined (6) 5941:14;5944:1; 5955:16;5956:1;	5968:16,18 determining (4) 5977:22;5997:4, 11;6091:7 develop (2) 5939:12;5973:8 developed (3) 5962:8;5987:19; 6060:17 developing (2) 5939:16;5987:23 deviate (1) 5937:8 diesel (2) 5993:10,20 differ (3) 5941:8;5943:3; 5957:8 difference (31) 5950:10,18; 5951:2,16,25; 5952:7,12,14,16,22, 25;5953:14;5957:3; 5980:1;5994:5,7,13; 6016:2,7;6017:13, 25;6023:20;6024:2; 6048:6;6061:23; 6062:19,20,25; 6063:13;6064:2; 6093:5 Differences (7) 5952:18;5956:11; 6022:9,13;6063:9; 6064:17;6126:1 different (60) 5933:23;5941:7; 5945:9,10;5946:16, 17;5956:9;5957:19; 5959:24;5967:15; 5978:25;5979:24; 5980:2;5985:2; 5992:11;5993:14; 5998:2;6008:19; 6009:9;6011:23; 6021:11,15;6022:2, 5;6023:24;6028:14; 6042:19;6048:16; 6049:3,4;6050:22; 6053:4,9;6055:13; 6062:21;6064:19,20, 21,22,23;6065:9,14, 16;6068:17,24; 6071:14,14;6074:2; 6077:3;6079:22; 6083:12;6086:5; 6087:7;6097:2; 6100:9;6105:5; 6124:24;6128:25; 6129:14;6130:3 differential (5) 5949:20;5955:18; 5957:25;6063:3; 6071:12	differentials (10) 5938:25;5939:10, 17;5949:4;5950:1; 5951:4,8;5955:9; 6062:2;6063:1 differentiate (1) 5970:13 differentiated (1) 5970:10 differently (1) 5933:18 differing (2) 5942:20;6076:15 difficult (9) 5946:4;5947:7,8; 5970:12;6014:19; 6063:12;6071:25; 6074:3;6121:9 dig (1) 6110:18 digested (1) 5986:23 digester (5) 6082:12,15; 6105:9,17,25 digressed (2) 6033:8,10 digressing (1) 6039:3 diminishing (1) 5953:25 dire (4) 5975:3,6,12; 5978:16 D-I-R-E (1) 5975:8 DIRECT (5) 6078:18;6110:8; 6111:2;6112:24; 6113:1 directed (2) 5939:5;6033:5 direction (5) 5935:15;5976:18; 6037:22;6076:8; 6115:5 directional (1) 6037:19 directions (2) 6026:7,9 directly (1) 5996:12 Director (16) 5937:24;5938:6; 5939:11;5973:8; 5977:2,4,10,11,14; 6079:19,20,20; 6080:2,3,4,7 disadvantage (2) 6068:12,15 disadvantaged (1) 6113:25 disaggregate (3)
--	--	---	---	--

6013:8;6042:24; 6045:8 disaggregated (4) 5939:14;5940:8, 17;6013:5 disbursed (1) 5998:16 discarded (1) 5970:11 discount (9) 5968:18,24; 6068:13;6120:2,3,8, 11,13;6122:5 discovery (3) 5938:24;5939:9; 5974:20 discuss (5) 5974:12;6055:14; 6065:9;6132:2,3 discussed (6) 5973:20;5992:22; 5997:2;6054:25; 6059:20;6068:2 discussing (4) 5939:1;5949:3; 6021:18;6040:7 discussion (14) 5938:21;5951:15; 5958:7;5978:15; 5984:20;5985:16; 5987:7;6020:11; 6049:8;6054:22; 6066:22;6070:22; 6075:19;6133:16 discussions (1) 6075:2 disorderly (7) 5956:16;6024:3; 6025:14,21;6026:6; 6058:13;6087:14 dispassionate (1) 5982:13 dispersion (1) 5988:25 displaced (2) 6036:9;6038:15 displayed (3) 5949:25;5965:5; 5988:25 displaying (1) 5946:3 Disposal (1) 5961:10 dispose (2) 5960:24;5961:1 disposing (5) 5959:21;5960:14, 22,23;6065:16 dispositions (1) 5941:15 distance (9) 5946:2;5961:1,8, 10,21;5962:2;	5963:4;6045:4; 6101:2 distances (4) 5946:1;5963:25; 6026:5,18 distant (3) 5941:23;5944:15; 6026:19 distinct (2) 5957:24;5960:4 distinction (1) 6013:10 distorted (1) 6055:11 distribute (3) 5939:22;5943:1; 6125:9 distributed (3) 5980:21;6059:16; 6066:19 distributes (1) 5940:2 distributing (2) 5943:11;6035:21 distribution (25) 5944:9,15; 5945:21,22;5946:7, 7;5948:16;5961:8, 24;5963:6;5967:23; 5988:7,8;6032:2,14; 6033:16;6034:19; 6035:13;6036:8; 6061:14;6066:13; 6067:19;6125:1; 6128:22;6129:23 distributor (1) 6130:10 distributors (3) 6067:1,2;6125:8 diversification (1) 6109:24 diversifying (2) 6085:5,25 divide (1) 6131:20 divided (2) 5963:4,23 Division (4) 5927:17;6074:16; 6102:17,18 divulge (1) 6052:17 docket (2) 5931:23;5932:1 Doctor (1) 5965:17 document (10) 5949:25;5950:6; 5970:22;5979:13; 5995:8;6001:5; 6020:3,8,21;6063:5 documentation (1) 6005:23	documenting (1) 5949:19 documents (8) 5933:20;5934:19, 20,21;5935:11,19; 6005:23;6068:2 dollar (3) 5952:10;6063:6, 23 dollars (3) 6063:10;6082:17; 6119:22 domestic (11) 5941:6;5943:11; 6032:6;6045:7; 6086:17;6096:11; 6107:23;6109:18; 6119:16;6120:12; 6125:20 Domestically (6) 6082:4;6107:22; 6109:13,15;6119:9; 6125:1 done (47) 5964:1;5967:11; 5970:17;5972:10; 5973:12;5979:8; 5992:2;6000:17; 6001:2;6006:19,20; 6007:23;6009:4; 6010:10;6012:8; 6013:14;6015:5; 6019:14;6020:5; 6022:17;6023:3; 6030:24;6031:10,14; 6032:5;6042:24; 6047:19;6053:1; 6055:19,22;6056:21; 6067:8;6087:2; 6093:14;6097:16; 6111:4,8,16,25; 6114:22,23;6115:7; 6131:22;6132:12,15, 19;6133:2 Doornenbal (1) 6134:7 double-check (1) 6090:23 doubt (1) 6017:4 down (27) 5933:6;5964:16; 5972:1;5981:9,10; 5982:16,19,24; 6004:11;6017:5,24; 6044:20;6050:4; 6061:19;6070:21; 6077:8,15;6079:9; 6093:23,25;6102:13; 6112:12;6113:15; 6115:13;6119:13; 6121:24;6128:2 downward (1)	6026:1 Dr (99) 5930:14;5931:16; 5932:20;5936:7,9, 21,23,24;5937:3,13, 14,20;5944:23; 5945:4,7;5949:11, 14,17;5951:7,13,21; 5952:3;5960:2,10; 5962:3,7;5964:6,9, 11,14,21;5965:20; 5966:6,17;5967:5, 11;5968:1,14; 5970:21;5971:4,8, 21;5972:5;5974:22; 5976:25;5977:2,6, 10,22,24;5978:1,9; 5981:14,17;5984:13; 5987:5;5989:24; 5990:11;5996:1,3, 10,16,21;5997:4,11; 6003:9,11,16; 6004:5,9,23; 6026:25;6027:13,14, 17;6028:3,7; 6047:15,24;6051:11; 6052:22;6056:16,23; 6057:12;6061:8,11; 6068:21,24;6069:9, 18;6070:10;6077:6, 7,9,14;6128:18; 6131:15;6132:2,5 dramatically (1) 6088:18 draw (1) 5955:22 drawn (1) 5942:14 dream (1) 6081:17 dress (1) 6107:13 dried (3) 5960:5;6082:1; 6097:2 driven (1) 5957:20 driver (2) 5943:5;6018:8 drives (1) 6074:19 driving (2) 6008:16,20 drop (1) 6038:2 dropped (1) 6093:24 dry (21) 5941:2;5957:18, 20,21;5958:10,12; 5968:14,19;5990:24; 6037:10;6040:11; 6043:23;6045:22;	6046:12;6069:22; 6088:24;6089:2,8; 6114:21,25;6115:2 dryer (1) 5970:14 drying (3) 5970:7;6000:8; 6089:1 dual (9) 5943:21,23; 5948:7,8,23;5993:8; 6037:24;6048:7,13 due (9) 5953:14,15; 6015:22;6087:15,25; 6088:5,5,17;6112:8 dumped (4) 6087:20;6127:13, 15,16 duplicate (1) 5934:7 During (19) 5952:20;5973:1,6; 5976:8;5994:18; 6020:20;6028:22; 6046:17;6047:6; 6057:9;6059:25; 6075:4,16;6079:14, 23;6092:10;6101:11, 22,22 duty (1) 6030:10 dynamic (4) 5979:7;6006:24; 6007:4,14
E				
earlier (9) 5979:21;5987:4; 6020:5;6043:21; 6076:1;6084:1; 6108:18;6129:23; 6134:8 early (5) 5957:15;5971:13; 5986:11;6022:3; 6055:18 easily (1) 5933:20 East (21) 5950:3,16; 5957:21;6014:3,6, 15;6016:17; 6045:14;6060:11; 6067:16,17;6081:1; 6086:4,8,24; 6090:12;6125:8; 6128:3,7,16;6129:2 Eastern (6) 5951:24;6016:19; 6017:4,6;6080:7; 6130:2				

<p>easy (1) 5935:19</p> <p>econometric (3) 6006:25;6007:2,3</p> <p>Economic (9) 5929:13;5941:12; 5976:15;6007:2,4,6; 6008:4;6014:18; 6017:20</p> <p>economically (1) 5948:3</p> <p>Economics (12) 5937:4,6;5974:23, 24;5975:1,14; 5976:6;5977:24,25; 5978:2,2;6015:11</p> <p>economies (1) 5963:11</p> <p>Economist (6) 5928:7,20;5929:9; 5938:5;5955:16; 5989:9</p> <p>Economists (3) 5955:22;5978:10; 6068:3</p> <p>economy (1) 5985:12</p> <p>edits (1) 6091:3</p> <p>effect (6) 6014:24,25; 6039:1;6058:12,14; 6064:13</p> <p>effects (2) 6050:4,6</p> <p>efficiency (3) 6032:14;6082:11; 6105:6</p> <p>efficient (12) 5939:23;5948:4; 5982:11;5984:9; 6032:2;6033:1,2; 6034:6;6035:13; 6037:21;6108:10; 6129:5</p> <p>efficiently (1) 6108:17</p> <p>effort (2) 5973:14;6068:25</p> <p>either (19) 5930:10;5946:12; 5975:20;5985:7; 6012:21;6026:18; 6027:11;6029:9; 6030:18;6036:4; 6040:12;6048:7; 6053:19;6060:11; 6066:18;6069:23; 6098:6;6117:18; 6131:21</p> <p>elaborates (1) 6062:4</p> <p>election (1)</p>	<p>6102:25</p> <p>electricity (1) 6082:12</p> <p>element (4) 6063:17,18; 6072:4,4</p> <p>elements (2) 6013:20;6028:17</p> <p>elicit (1) 5976:4</p> <p>eliminate (7) 6083:24;6084:21; 6085:7,19;6086:1; 6120:9;6125:17</p> <p>eliminated (3) 6022:10,14; 6120:9</p> <p>eliminating (1) 6094:18</p> <p>else (16) 5930:21;5966:16; 5977:21;5990:14; 6030:22;6036:4; 6037:6;6038:13; 6047:19;6070:6; 6091:12;6099:2; 6102:16;6115:4; 6130:13;6133:20</p> <p>else's (1) 6129:8</p> <p>emblematic (1) 5981:5</p> <p>emerging (2) 6086:14,18</p> <p>emphasis (6) 5948:20;5974:24, 25;5977:25;5978:2; 5993:8</p> <p>employ (1) 6074:2</p> <p>employed (3) 5938:6;5968:3; 5969:10</p> <p>employees (3) 5927:14;6081:6; 6100:9</p> <p>enclosed (1) 6017:5</p> <p>encompass (1) 5933:1</p> <p>end (14) 5931:8,14; 5945:13;5970:20; 5973:20;5994:6; 6004:6;6040:7; 6090:16;6108:16; 6112:6;6113:4; 6115:18;6123:19</p> <p>endogenous (1) 5991:19</p> <p>endogenously (1) 5992:18</p> <p>endorse (1)</p>	<p>5932:24</p> <p>ends (1) 6037:22</p> <p>enemy (1) 6084:9</p> <p>energy (1) 5943:3</p> <p>engaged (1) 6031:4</p> <p>England (2) 6065:14;6080:6</p> <p>England's (1) 6018:24</p> <p>ENGLISH (46) 5928:23,24; 5929:10;5932:14,15, 15;5934:11,17; 5971:17,19,23,23, 24;5972:7;5975:1; 5978:3,5;5981:13, 25;5982:2;5984:14, 15,17;5995:4,5; 5996:5,7,11,15,22, 23,24;6026:25; 6027:1,11,19; 6039:24;6077:15,16; 6131:8,9,12; 6132:22,24;6133:6,9</p> <p>E-N-G-L-I-S-H (1) 5928:24</p> <p>enhance (1) 6073:9</p> <p>enjoy (1) 5931:12</p> <p>enough (22) 5956:8;5957:1,8; 5970:3,17;5982:21, 23;5983:13; 5985:21;5986:2,6, 23,25;5995:21; 6009:2;6019:7,16; 6022:4;6024:5; 6082:24;6093:7; 6108:11</p> <p>entered (5) 5985:25;6001:1; 6051:6,11;6052:23</p> <p>enterprise (1) 6102:2</p> <p>entire (1) 6038:3</p> <p>entirely (3) 5973:4;6076:10; 6086:5</p> <p>entities (4) 5941:22;6099:7; 6103:8;6133:6</p> <p>entitled (1) 5963:6</p> <p>entity (3) 6099:20;6103:11, 20</p> <p>entwined (1)</p>	<p>5977:16</p> <p>environment (1) 6082:12</p> <p>Environmental (1) 5947:24</p> <p>equal (5) 5950:22;6063:24; 6064:16;6072:17; 6121:15</p> <p>equates (1) 6118:16</p> <p>equations (1) 5992:16</p> <p>equilibrate (1) 5955:25</p> <p>equilibrium (2) 5952:1;5956:4</p> <p>equipment (3) 5960:4;6088:16, 17</p> <p>equivalent (1) 6038:9</p> <p>Erba (1) 5949:6</p> <p>Eric (1) 5949:6</p> <p>Erin (4) 5927:21;6047:21; 6123:14;6131:17</p> <p>ERS (3) 5941:13;6012:1,7</p> <p>especially (1) 5988:3</p> <p>essence (2) 6008:11;6072:11</p> <p>essentially (8) 6001:11,12; 6012:21;6037:1,24; 6057:2;6060:16; 6120:8</p> <p>establish (1) 6071:12</p> <p>estimate (3) 5940:13;5966:19; 6124:21</p> <p>estimated (6) 5947:20;5962:12, 14;5963:13,19; 5965:6</p> <p>estimates (4) 5940:10;5949:7, 14,20</p> <p>etcetera (6) 5941:2,5;5976:5; 6012:23,23;6051:18</p> <p>European (2) 6069:2,12</p> <p>evaluate (2) 5947:9;5977:19</p> <p>evaluated (1) 5947:16</p> <p>even (18) 5935:20;5946:1;</p>	<p>5965:8;5971:13; 5978:16;5987:11; 6014:5;6022:5; 6034:5;6037:6; 6049:4;6055:9; 6086:14;6093:8; 6109:8;6113:6,9; 6131:4</p> <p>evening (1) 6134:14</p> <p>event (1) 6102:12</p> <p>events (2) 6057:23;6058:12</p> <p>ever-changing (1) 5956:3</p> <p>everybody (4) 5933:25;5935:7; 6063:2;6125:25</p> <p>Everybody's (2) 5930:25;5934:15</p> <p>everyone (5) 5931:12;5935:19; 5972:4;5975:5; 6047:19</p> <p>everywhere (2) 6071:5,18</p> <p>evidence (14) 5927:8,8;5936:20; 5956:16;5997:6,7,9, 13,14,16;6078:9; 6091:8,9,11</p> <p>Evolution (3) 5953:8;6005:24; 6022:3</p> <p>evolved (2) 6013:21;6022:8</p> <p>exact (1) 6106:6</p> <p>exactly (10) 5942:12;5955:25; 5999:11;6030:3; 6036:17;6055:5; 6060:25;6063:9; 6104:23,25</p> <p>EXAMINATION (2) 5975:12;6078:18</p> <p>example (28) 5941:12;5942:3; 5944:3;5947:4; 5966:6;5967:14; 5979:4;5980:1; 5982:22;5984:24; 5988:20;5992:4,10; 6008:2,18;6014:6; 6016:18;6017:17; 6024:13;6026:8,17; 6036:12,21;6037:2; 6050:24;6058:9; 6060:10;6075:8</p> <p>exceed (1) 5943:19</p> <p>exceeding (1)</p>
---	--	--	---	--

6034:3 exceeds (1) 6029:15 excellent (4) 5927:10;5967:2; 6027:15;6051:21 except (5) 5982:8;6015:3; 6093:12;6097:3; 6114:4 exception (2) 5955:6;6017:3 excess (4) 5942:3;6050:2; 6070:3;6095:13 excluded (1) 5958:23 exclusively (1) 6102:2 Excuse (6) 5951:7;5962:1; 5964:11;5988:9; 5991:7;6000:24 exempt (1) 6132:17 Exhibit (50) 5936:11,14,15; 5971:6;5977:1; 5978:9,13;5989:13; 5996:25,25;5997:2; 3,6,6,8,10,13,14,15; 6001:6;6004:4,5; 6010:17;6011:11; 6015:25;6021:17; 6022:19;6031:21; 6034:9,20,22; 6039:4;6043:2,3; 6051:6,11;6052:20; 6057:22;6058:13; 6070:13;6078:3,3,4; 6089:18;6091:5,8,9, 10;6110:7;6118:22 exhibits (6) 5927:9,10;5931:9, 10;5932:10,11 exist (3) 5982:16;6040:2; 6071:20 existed (3) 5939:25;6036:13; 6073:6 existing (3) 5940:2;6030:18; 6036:18 expanded (2) 5991:3;6081:19 expect (4) 5935:12;6031:4; 6038:16;6132:2 expectation (1) 5933:5 expected (2) 5932:18;6038:20	expecting (1) 5934:14 expenses (1) 5976:10 expensive (1) 6076:21 experience (9) 5965:19,20; 5967:18;6009:12; 6055:7;6074:14; 6111:22;6113:12; 6119:8 experienced (2) 6058:2,10 experiencing (2) 6074:7;6076:13 experimented (1) 6021:24 expert (3) 5974:23;5977:24; 5978:1 explain (8) 5991:19;6004:5; 6043:22;6044:2; 6048:20;6049:24; 6056:4;6063:13 explained (6) 5969:4;6018:1,23; 6019:24;6046:21,23 explanation (1) 6069:14 explicitly (1) 5991:3 explore (2) 6023:3;6070:12 export (23) 5941:6;5943:12; 6032:8;6034:4; 6043:24;6044:10,20; 6060:16;6065:5; 6082:7;6086:11,12, 17,19;6095:23; 6096:1,9,13,17,19; 6119:10,16,21 exported (10) 6065:6;6068:16, 22;6087:8;6095:17, 18,24,24;6096:14; 6107:22 exporter (1) 6069:4 exports (14) 5940:9;5942:9,11; 6043:21;6044:1,2,5, 16,16;6045:10; 6069:8;6095:21; 6109:14;6126:13 express (5) 5981:22;6023:5; 6024:19,19;6071:25 extensive (1) 6012:10 extensively (1)	5949:1 extent (6) 6037:16;6044:15; 6065:7,12;6120:1; 6124:8 extra (5) 6038:1;6051:5; 6054:14;6064:10; 6129:11 extreme (1) 6069:25 eye (2) 6025:15;6069:21 eyeballing (2) 6004:22;6034:17	F facilities (3) 6028:12;6029:25; 6084:2 facility (3) 5942:5;6040:10; 6106:4 fact (23) 5933:7;5951:13; 5964:9;5977:19; 5985:19,24;5986:18; 5991:25;6011:18; 6014:4;6015:19; 6025:10;6041:13,14; 6044:18;6065:18; 6068:18,21;6069:1; 6075:20;6087:14,14; 6094:5 factor (5) 6018:13;6040:22; 6093:18,21;6094:10 factored (2) 5943:4;6044:3 factors (4) 6014:25;6015:1, 15,22 failure (1) 6025:25 fair (9) 5954:1;5978:20; 5980:3;5998:3; 6013:15;6025:19; 6073:14;6086:4; 6090:13 fairly (7) 5939:20;5980:18; 5981:4;5982:13; 6011:23;6012:9; 6022:3 falling (1) 6076:12 Falls (1) 5972:22 familiar (2) 6092:18;6116:20 far (12)	5927:10;6008:15; 6018:4;6022:4; 6032:11;6046:25; 6051:22;6093:7; 6095:5,18;6122:17; 6124:18 Farm (24) 5939:4;5940:1,7; 5945:13,14;5948:9; 5949:1;6003:7; 6007:8,21;6026:5,5; 6074:15;6075:17; 6076:20,22;6079:3; 6081:3;6099:14; 6100:12,13;6103:20; 6106:20;6113:9 farmer (2) 6114:13;6132:8 farmer-owned (1) 5929:14 Farmers (11) 5928:13;5970:2; 6056:22;6079:13,15, 17,23;6101:15,17, 20;6120:15 farming (6) 6079:4;6081:8,9, 15;6099:13;6104:16 farms (31) 5939:21;5943:10, 15;5944:5;6077:19; 6079:2,3;6080:23; 6081:6;6082:5; 6084:19,22;6085:16; 6088:10;6089:15; 6094:13;6098:19; 6099:7;6101:14,21; 6103:10;6104:10; 6113:9;6118:13; 6119:11,15;6120:24; 6121:12,14,17,20 farther (2) 6093:11;6110:25 fashion (4) 6014:13,14; 6021:10;6024:1 fast (1) 6133:19 fat (4) 5941:9;6062:5; 6097:19;6127:12 favor (3) 5932:21;5944:14; 6065:7 fear (4) 5969:18;6023:5; 6024:5;6025:10 February (1) 5955:8 fed (1) 5960:22 Federal (65) 5928:4,7,8;	5933:19,22;5934:20; 5938:4,20;5952:19; 5955:15;5959:13; 5965:22;5967:5; 5969:19;5974:10; 5976:12;5988:11; 5999:17;6022:2,12, 22;6023:6,14; 6026:16,16;6031:14; 6033:14;6043:9,17; 6058:3,6;6059:18; 6061:13;6068:4,7, 15;6070:23; 6073:15;6076:4; 6077:2;6079:15; 6080:17,19;6082:20; 6084:20;6086:14; 6087:9,13;6088:21; 6089:9;6092:11; 6093:9;6094:17; 6111:6,11,15; 6112:1,4;6120:20; 6121:2,6,15,17; 6122:4;6133:23 feed (12) 5931:4;5932:2; 5945:25;6074:19,25; 6075:18,24;6081:4; 6097:5,20,25; 6107:14 feeds (2) 5932:6,8 feel (5) 5986:24;6009:3; 6015:4;6086:4; 6090:12 feels (1) 6076:22 fees (1) 6123:5 feet (1) 6097:10 fellow (1) 5927:13 felt (3) 5947:6;5979:15; 5986:1 fertilize (1) 6082:16 Feta (1) 6012:22 few (21) 5955:6;5963:10; 5981:19;5985:24; 5991:5,12;6006:13; 6012:7;6014:4,6; 6024:21;6042:2; 6044:5;6057:3; 6061:2;6082:19; 6084:23;6093:5; 6108:12;6110:16; 6123:18 fewer (2)
---	--	---	---	--	--

<p>5966:9;6084:16 fiduciary (1) 6030:10 field (1) 6072:18 fieldman (1) 6079:25 Figure (72) 5944:4,4,10,13,16, 24,24;5945:3,3,10; 5946:9;5949:25; 5950:4,15,24; 5951:3,22;5952:6, 24;5954:8,18; 5955:5;5961:8,9; 5962:24;5963:6,12, 16;5965:5,9,9,11,16, 18;5967:3;5980:7, 13,23;5982:3,4; 5983:22;5984:2; 5988:5;6005:12; 6011:7;6013:24,25; 6015:24;6018:23; 6019:24;6020:7,18; 6022:19;6033:10; 6034:19,21;6040:8; 6046:13;6048:15; 6049:7,15;6055:15; 6061:22;6062:3,7; 6064:1,7;6066:11; 6070:13,13,16; 6092:9 figured (2) 6111:9;6132:9 figures (6) 5944:24;5948:3; 5952:11;5954:22; 5980:4;6011:6 figuring (1) 5994:4 filata (3) 6081:22;6098:1; 6124:4 file (1) 5931:11 fill (1) 5983:13 filling (1) 6108:15 filtered (1) 6097:6 filters (1) 6097:14 final (51) 5940:25;5941:4; 5955:8;5960:3,5,20, 21;5961:4;5962:20; 5964:2,24;5965:8; 5966:2,22,25; 5988:15;5991:6; 5992:13,21;6000:4, 10,19,22;6001:4; 6004:13;6006:18;</p>	<p>6010:16;6011:10,10; 6013:3;6022:12; 6023:2;6040:11,16; 6042:1,5;6044:11; 6045:21,22,25; 6046:6,10,12; 6053:18;6054:4; 6056:1,12;6065:25; 6066:3;6107:8; 6125:15 Finally (1) 5943:18 find (19) 5933:10;5935:19; 5943:9;6019:16; 6029:10;6030:1,9; 6032:2,10;6033:15; 6049:16;6055:12; 6080:14;6084:16,17; 6093:8;6120:17; 6122:25;6125:8 finding (2) 6029:17;6030:25 fine (3) 6054:16;6124:2; 6133:17 finessed (1) 5991:21 finish (2) 6002:5;6121:14 finished (15) 5931:15;5940:3; 5942:22;5943:2,16; 5944:9,15;5945:21; 5946:13;5948:16; 6066:13;6067:16; 6068:23;6069:7,15 firm (4) 5928:16,24; 5929:22;5938:8 firms (5) 5969:22;6023:10; 6024:8,9,24 first (43) 5932:12,17; 5946:19;5951:5; 5959:5;5965:9; 5968:9,10;5972:2, 19,21;5976:25; 5988:5;5990:9,16; 5995:7;6006:9; 6023:4;6027:7; 6042:2;6046:9; 6048:1,4;6051:9,15; 6053:5;6054:2; 6057:16;6067:23; 6076:11;6090:16; 6091:3;6092:2; 6101:14;6105:9; 6110:9;6111:3; 6115:15;6116:16; 6123:15;6124:3; 6126:25;6131:19</p>	<p>Fish (1) 6052:22 fit (1) 6053:5 fitting (1) 6130:21 five (10) 5933:10;5947:11, 19;5955:1;5974:2; 6009:13;6056:18; 6081:20;6098:14; 6121:7 fixed (6) 5933:20;5950:24; 5969:4;6056:8; 6063:1,15 flat (1) 5957:9 flexibility (1) 6133:18 flexible (1) 5936:5 flocculate (1) 6039:11 Florida (8) 5955:7,9;5981:11; 5982:7;5994:5,7; 6035:21;6086:8 flow (14) 5944:17;5980:20; 5981:21;6016:22; 6034:20;6035:5,5; 6036:8;6037:4; 6049:6;6065:4,4; 6108:7,8 flows (16) 5943:22;5944:5; 5945:8,11,20; 5946:10,13;5950:16; 5951:22;5981:8; 6031:25;6034:13,14, 22,23;6066:24 fluid (23) 5941:5,9,25; 5942:3,6,8;5944:16; 5945:10,16,21; 5946:19;5948:6,11, 23;5949:22; 5970:25;6029:7; 6032:23,25;6034:5, 13;6038:12;6100:3 flush (2) 5944:3;6082:14 FMMO (6) 5938:5,9;5939:3; 5940:14;5956:21,24 FMMO's (6) 5938:24;5939:6; 5941:15;5956:5,19; 5958:13 FOB (1) 6124:14 focus (2)</p>	<p>6019:23;6028:11 focused (3) 5938:8;5975:17; 6125:19 focuses (1) 6005:25 focusing (1) 6094:8 folks (3) 5973:20;5974:3; 6041:4 follow (1) 5993:6 following (3) 5986:3;6004:10; 6038:14 follows (1) 5948:10 Food (6) 5927:17;5947:24; 6066:18;6067:4; 6082:9;6096:12 Foods (2) 5930:18;6132:16 Footnote (10) 5940:18;5946:25; 5949:5,11;5952:17; 5953:1;5962:8; 5979:16;5996:5,12 footnoted (1) 5947:25 forces (1) 6007:6 foreign (1) 6044:1 forgot (1) 6042:15 form (13) 5960:17;5979:17; 6024:19;6045:20; 6046:5;6049:9; 6053:8;6054:21; 6066:19;6115:23,25; 6116:7;6120:14 former (1) 6034:4 forms (1) 5961:5 Formula (16) 5951:1;5957:19; 5964:17;5966:15,19; 5969:19;6023:7; 6047:11;6063:21,23, 25;6092:19; 6093:15;6094:1,5,9 formulas (10) 5956:25;5957:23; 5969:7,25;5974:19; 6022:11;6023:15; 6047:4;6095:2,4 for-profit (2) 6028:15,25 forth (1)</p>	<p>6075:16 fortification (1) 6132:10 fortified (1) 5941:9 fortunately (1) 6122:3 forward (5) 5930:15,21,22; 5933:23;5936:7 found (7) 5930:23;5931:5; 5940:20;6029:20; 6082:5;6094:6; 6125:4 four (4) 6013:10;6022:11; 6080:2,4 fourth (2) 6115:14;6128:1 fractions (1) 5991:18 France (1) 6078:13 Francisco (1) 5928:17 freedom (2) 6050:13,13 frequency (5) 5965:6,12;5966:3; 5988:17;6046:17 frequently (6) 5956:19;5966:5; 5977:12;5989:3; 6028:23;6095:22 fresh (1) 6028:9 Fresno (1) 6044:19 Friday (8) 6131:22;6132:16; 6133:11,14,15,20; 6134:5,7 friends (1) 5969:9 FRISIUS (5) 5927:25,25; 5936:10,12;6090:14 F-R-I-S-I-U-S (1) 5928:1 front (2) 6004:18;6034:9 Fuel (18) 5943:3;5992:25; 5993:2,10,10,14,16, 20,25;5994:3,6; 6034:14;6050:19,20, 20,21,21,23 full (4) 6056:25;6089:22; 6090:2,8 fully (4) 5958:10;5962:13;</p>
--	---	--	--	---

5992:17,17 fun (1) 6111:17 function (5) 6029:25;6031:4; 6067:3;6072:22,25 functionality (1) 6039:20 functions (3) 5991:17;6029:2; 6050:24 fundamental (2) 5955:10;5979:1 fundamentally (1) 6074:4 further (23) 5941:3;5946:7; 5960:3;5963:1,7; 5988:14;6001:19; 6007:25;6019:13,17; 6022:1;6040:8; 6046:7;6062:4; 6069:23;6072:5; 6085:14,16;6091:17; 6097:8;6098:10; 6130:17,19 future (3) 5933:24;5984:20; 6100:7 fuzzy (2) 5983:23;6025:22	5993:17,20; 6034:15 Gallo's (8) 6079:4;6083:3,9, 17;6089:11;6103:10, 13;6110:11 Galveston (1) 6045:11 Gao (1) 5948:1 gap (1) 6054:11 gaps (1) 5983:14 Gary (1) 5928:21 G-A-R-Y (1) 5928:21 gather (1) 6120:25 gave (2) 6060:3;6123:20 gears (1) 6033:4 General (9) 5927:16;5928:10; 5976:17,18;6001:15; 6071:6;6133:7,7,9 Generally (10) 5950:2,16; 5953:19;5957:22; 5987:15;6016:22; 6022:24;6068:18; 6076:13;6118:19 generate (5) 6018:2;6047:4,16; 6063:9;6082:24 generated (4) 6003:1,2;6022:22; 6063:7 generates (2) 5949:22,24 Generating (2) 5976:15;6009:19 genesis (1) 5987:23 geographic (2) 5939:15;5957:9 geographically (2) 5941:23;5956:9 geographically-weighted (1) 5954:24 geography (3) 5997:25;5998:3,4 Georgia (2) 5955:7;6035:21 gets (7) 5932:19;5946:15; 5967:20;5981:21; 6130:4,6;6132:15 given (13) 5934:25;5978:20; 5999:12;6003:8;	6007:6,9;6010:18; 6013:5;6035:16; 6041:2;6064:22; 6073:3;6074:13 gives (4) 5944:11;5954:21; 5961:22;5989:2 giving (6) 5983:13;6019:19; 6050:12,13;6071:16; 6073:21 glad (3) 5936:4;6077:21; 6130:22 global (9) 5946:22;6068:22; 6081:1;6082:2,17; 6096:20;6099:8,10; 6108:23 goes (20) 5965:14;6005:25; 6010:1;6022:1; 6042:19,21;6047:2; 6050:5;6053:6; 6059:6;6064:4; 6070:3;6082:15; 6097:1,9,24,25; 6107:18;6118:18; 6129:3 Gomez (1) 5948:1 Good (58) 5927:15,18,21,23, 25;5928:2,9,11,15, 23;5929:8,12,18,21, 25;5932:15;5936:1; 5964:19;5971:21; 5975:9;5976:24; 5982:9;5985:11; 5995:10;5997:21,22; 6005:10,20;6006:11; 6028:7,8;6047:12, 24,25;6058:18; 6059:6;6067:12; 6070:10;6075:9; 6077:10,21;6090:15; 6091:22,23;6095:17; 6103:23;6104:4,5; 6107:13;6113:14; 6118:6,7;6123:12, 13;6129:18,20; 6131:9;6134:1 Gorgonzola (1) 6012:22 Gouda (1) 6012:22 Grade (3) 5938:21;6087:23; 6088:2 gradually (1) 6101:8 graduate (3) 5975:16,19,20	graph (3) 5955:22;5962:6; 6046:22 graphic (4) 5965:5;5967:1; 5980:15;6018:12 grateful (1) 5937:13 gray (2) 5961:13,22 great (8) 5945:6;5948:4; 5958:5;5981:7; 6001:23;6003:5; 6017:5;6096:13 greater (7) 5947:15;5954:21; 5972:12;5981:23; 5984:21;5990:25; 6098:2 greatly (1) 6088:7 Greek (3) 5991:9,11;6013:6 green (12) 5944:4,6;5945:14, 23;5972:14; 5980:18;5981:14,19; 5982:6;6020:19; 6021:4;6048:18 grew (1) 6101:8 grocery (2) 6082:6;6125:5 gross (3) 5942:20;6004:1; 6005:4 Group (3) 6004:11,11; 6077:11 groups (3) 5973:23;6021:15; 6027:17 grow (4) 6084:10;6085:14, 16;6119:15 growing (1) 6109:22 grown (1) 5957:4 growth (8) 5954:15,17; 6020:25;6072:8; 6086:16,18;6101:3; 6119:11 guess (24) 5976:8,17;5980:7; 5995:1;6013:15; 6017:18;6020:21; 6023:17;6027:11; 6049:4,24;6055:15; 6056:3;6058:5,16; 6059:14;6060:24;	6081:8;6090:7; 6096:24;6097:25; 6098:2;6106:3; 6128:3 guide (1) 5937:12 guidelines (1) 5939:5 Gulf (5) 5942:11;5981:11; 5982:7;6044:9; 6045:12
H				
half (9) 5953:13,15; 5963:9;6065:6; 6068:22;6093:25; 6118:17,20;6120:15				
HANCOCK (6) 5929:18,18; 6132:25;6133:10,13, 13				
hand (6) 5936:18;5958:8, 11;6004:4;6027:9; 6078:7				
handle (3) 6037:9;6099:10, 13				
handled (1) 5934:19				
Handlers (2) 5929:19,23				
handling (4) 6065:17;6085:7; 6086:2;6094:18				
hands (1) 6027:5				
handy (2) 5978:13;6034:12				
hanging (1) 6133:22				
Hanson (1) 5928:16				
H-A-N-S-O-N (1) 5928:17				
happen (3) 6009:14;6016:14; 6037:14				
happened (3) 5956:18;6020:24; 6125:23				
happening (1) 6069:3				
happens (5) 5954:14,14; 6009:6;6033:25; 6070:1				
happy (1) 5937:3				
hard (4)				

5933:9;5950:6; 6025:23;6096:10 hardship (1) 6093:16 haul (4) 6124:13,15,17,18 haulers (2) 5987:13,13 hauling (6) 5960:24,25; 5962:9,12,13; 5987:21 hawk (1) 6095:14 head (2) 6025:11;6047:13 headache (1) 5930:6 health (1) 6110:17 hear (4) 5930:24;5975:5; 6071:2;6086:18 heard (12) 5934:9;5984:3,5; 6008:24;6069:16; 6072:6;6087:20; 6109:25;6124:5; 6127:5,11;6130:7 hearing (28) 5927:5,8,13; 5929:3,4;5931:7,8, 17,24;5938:4; 5947:6;5976:12; 5985:23;5999:4; 6015:6;6017:9; 6019:23;6022:18; 6066:22;6069:16; 6072:6;6075:21; 6077:13;6081:12,14; 6093:24;6110:16; 6123:24 hearings (9) 5938:9;5949:3; 5974:6,10;6079:15, 18;6080:17,18,19 heartburn (2) 6093:18,19 heavily (1) 5987:12 heavy (5) 5980:18;5981:9; 6044:18;6057:9; 6065:5 heifers (1) 6105:1 held (1) 6075:21 help (10) 5931:11;5951:10; 5953:11;5965:16; 5976:21;6003:9; 6081:16;6098:11;	6099:22;6122:5 helped (3) 5939:12;5973:8; 5990:14 helpful (4) 5937:10;5945:5; 6047:12;6134:1 Henry (1) 5928:6 H-E-N-R-Y (1) 5928:6 here's (1) 6021:18 herself (1) 5930:16 hey (1) 6130:8 high (15) 5947:16,18,20; 5984:22,23;6016:1; 6050:25;6070:2; 6087:1;6098:2,3; 6114:7;6116:3,10; 6128:17 higher (26) 5953:14;5957:2, 11;5969:13; 6038:23;6050:23; 6071:3;6072:21,23; 6074:9;6084:24; 6085:18;6086:9,22; 6092:7;6113:6; 6117:25;6119:6; 6121:22;6122:8; 6125:23;6126:4,12; 6128:4,10,12 Higher-yielding (1) 6074:5 highest (2) 5966:4;6038:19 highly (3) 5939:19;6108:19, 22 high-valued (1) 5950:3 Highway (1) 6080:23 HILL (2) 5927:15,15 H-I-L-L (1) 5927:16 Hillbilly (1) 6131:6 Hilmar (6) 5929:13,15,17; 6028:6;6100:24; 6129:1 hired (3) 5972:22,24; 6081:16 Hispanic (1) 6012:23 histogram (4)	5965:5;5988:6,7; 6005:13 historically (5) 5956:9;6025:24; 6028:20;6029:6; 6094:24 history (5) 6015:15;6021:19; 6070:22;6080:10; 6101:24 hold (1) 6073:14 holes (1) 6111:16 Holstein (1) 6114:9 home (7) 6028:18;6029:17, 19;6030:1,9,25; 6037:5 honestly (4) 5972:16;6098:5; 6110:15;6122:19 Honor (18) 5928:23;5930:17; 5932:15;5933:7; 5971:20,25;5974:21; 5978:6;5982:1; 5984:15;5987:2; 5996:5,13;6002:21; 6031:22;6061:18; 6089:20;6098:10 Honor's (1) 5935:2 hope (2) 5932:19;6071:19 hoping (2) 6131:2;6133:17 hot (2) 6053:14;6074:6 hour (2) 6027:2,3 House (2) 6075:19,21 Houston (2) 6045:11,12 http://DairyMarkets.org/CA (1) 5940:21 huge (1) 6129:1 human (5) 6015:1,15; 6035:12,15;6037:17 humid (1) 6074:6 hundred (7) 5973:4;6002:14; 6043:25;6064:10; 6081:20;6113:23; 6114:1 hundredweight (21) 5948:12;5950:10; 5951:16;5952:13;	5962:12,14,15,16; 5963:20;5965:11; 5969:2;6016:3; 6038:1,4;6056:3,7, 11;6087:18;6094:6; 6095:13;6127:3 hurt (1) 6122:16 hydroxide (1) 6039:13 I ice (4) 5941:4;5942:4; 6048:23,24 Idaho (6) 5954:16;5998:22; 6036:5;6059:2; 6065:13;6088:20 idea (3) 5993:12;6052:2, 10 ideas (1) 5975:23 identical (2) 5955:20;6063:14 identifiable (1) 5935:5 identification (2) 5936:16;6078:5 identified (2) 5948:25;6070:15 identify (3) 5930:16;6001:11; 6078:15 identifying (1) 5936:1 identity (1) 5992:1 ie (2) 5941:25;6016:15 II (3) 6029:16;6033:14; 6070:24 III (31) 5950:9,25; 5952:19;5956:25; 5957:17;5969:19; 6020:12;6022:14,15; 6023:6,14;6033:18, 21,25;6043:6,10,11, 13,17;6047:7; 6062:17,20;6063:11, 18;6068:4,6; 6070:24;6082:21; 6086:14;6092:11; 6121:15 IIIa (3) 5957:18,18; 6021:21 Illinois (1) 5951:17	illustration (1) 6034:2 illustrations (1) 6035:24 imagine (1) 6069:21 imbalances (1) 6029:11 immediately (1) 6084:14 impact (4) 5954:16;5958:5; 5974:1;5993:13 impacts (5) 5974:19;5993:9, 14;6049:25;6115:7 impassionate (1) 6019:9 implement (1) 5976:23 implementation (2) 5969:16;6089:9 implemented (3) 5956:23;5976:9; 6092:21 implications (2) 5955:13;5975:25 imply (3) 6020:20,23; 6071:20 importance (1) 5951:2 important (20) 5935:7;5943:5; 5947:6;5948:21; 5951:15;5952:11; 5953:10;5954:12; 5972:6;5979:5,16; 5991:1;6006:15; 6013:9;6015:4; 6018:8;6019:22; 6050:16;6062:24; 6095:21 imports (6) 5940:9;5942:9,11; 6043:21;6044:2,5 imposed (2) 5943:13;6036:25 imposing (2) 5969:18;6023:5 impossible (2) 6087:1;6094:4 improve (2) 6082:11;6105:6 improved (2) 6081:19;6106:1 improvements (2) 6082:22;6106:8 improving (1) 6076:14 imputed (1) 6063:18 imputes (1)
---	---	---	---	---

6066:2 inability (1) 6096:16 inaccurate (1) 6119:19 Inc (3) 5928:13,13,14 incites (2) 5938:15;6007:11 include (23) 5937:18;5940:7; 5943:13;5966:13; 5986:6;5991:3,8; 6000:7;6006:12,13; 6011:3,15,20; 6035:11,11;6040:25; 6052:14,16,18; 6054:1;6100:9; 6103:10;6117:15 included (18) 5946:23;6005:18; 6008:8;6011:19; 6012:10,18;6039:5, 5;6046:22;6053:21, 22;6057:25;6058:2; 6064:6;6072:11; 6092:24;6116:23; 6119:4 includes (8) 5940:23,25; 5988:10,12;5994:19; 6006:17,19;6046:6 including (14) 5931:21;5935:14; 5937:19;5939:3; 5998:19,22;6011:13; 6013:21;6031:14; 6073:1;6081:21; 6086:12;6088:13; 6089:11 income (1) 5969:7 incomes (1) 6086:15 incorporate (1) 6067:3 increase (14) 5930:5;5950:2; 6037:15;6050:25; 6083:23;6085:14; 6088:7;6108:6,7; 6114:5;6120:22; 6125:16;6126:11; 6129:2 increased (14) 5942:14;5953:19, 20,22,23;5993:11, 17;6036:24; 6083:18;6084:25; 6085:4;6086:13; 6088:18;6110:11 increases (3) 6020:19;6087:16;	6126:8 increasing (1) 6039:1 incur (1) 5960:23 incurred (2) 5964:23;5969:8 indeed (6) 5933:15;5946:21; 5958:6;6020:12; 6108:20;6109:1 indemnities (1) 6075:1 indemnity (1) 6074:19 independent (1) 6021:7 independents (1) 6106:23 in-depth (1) 6111:8 index (2) 6050:21,25 indicate (6) 5946:12;5947:1; 5951:23;5992:2; 6119:19,21 indicated (15) 5935:12;5959:13; 5966:1;5968:2,15, 17;5969:1;5975:18; 5991:14;6004:21,25; 6058:17;6065:23; 6101:24;6132:24 indicates (4) 5940:1,18;5948:8; 5980:17 indicating (6) 5946:6;5980:19; 6009:8;6027:3; 6042:20;6065:5 indication (5) 5935:3;5944:12; 5945:19;6001:9; 6019:2 indicative (1) 5945:9 indicator (3) 6037:19;6075:3,8 individual (3) 5940:1;5946:4; 6073:1 indulge (2) 6051:4;6075:13 industry (24) 5938:8;5939:14; 5948:2;5969:10,20; 5970:16;5973:3,5; 5974:15;5976:14; 5979:6;5987:16,17; 5993:9;6001:16,24; 6003:1;6021:6; 6023:7,19;6075:10,	11;6084:12,18 inefficiency (1) 6035:13 inefficient (1) 6036:7 inextricably (1) 5977:16 infer (1) 6094:21 information (37) 5935:14,22; 5943:6;5944:19; 5946:3;5967:2; 5972:6;5985:22; 5986:12,15,23,24, 25;5989:2;5997:24; 5998:6,12;5999:4, 15,23;6000:13; 6005:12;6007:10; 6009:2;6017:11; 6019:16;6035:5; 6051:25;6079:5,5; 6099:16;6111:10; 6112:16,25;6113:1; 6127:9;6134:3 informed (1) 6133:4 ingredient (1) 5966:23 ingredients (3) 5943:1,14; 5991:24 inherently (1) 6073:20 initial (4) 5951:9;5952:3; 5962:21;5963:14 initially (2) 5987:19;6050:1 initials (1) 6099:17 Inn (1) 5931:18 in-plant (1) 6126:24 input (7) 5934:2;5936:5; 5958:6;5987:25; 6007:24;6022:23,25 inputs (1) 6006:1 insert (2) 6090:12,21 inserted (2) 6089:24;6090:15 inside (1) 6075:2 insight (1) 5973:13 insights (2) 5939:15;5985:22 instance (8) 5933:19;5941:8;	5952:17;5999:25; 6015:7;6019:4; 6026:11;6065:2 instances (4) 6025:9;6026:15; 6030:20;6042:22 in-state (1) 6107:21 instead (1) 5964:10 Institute (4) 5929:7,9;5932:18; 6078:16 instituted (1) 6106:9 Institute's (5) 6081:11;6088:8, 22;6090:19;6114:20 intended (1) 5976:22 intensity (3) 5940:16;5954:8, 19 interest (2) 5936:3;5947:5 interested (4) 6006:3;6010:21; 6096:4;6099:3 interesting (3) 6099:3;6128:23; 6130:14 intermediate (9) 5940:25;5941:1; 5942:25;5990:23; 5991:1,18;5992:14, 22;6006:18 internal (2) 5954:17;6055:9 internally (1) 5992:18 international (1) 5947:24 interpolates (1) 5983:20 interpolation (1) 5983:16 interpret (2) 5950:17;6048:10 interpretation (2) 5950:8;5952:9 interpreted (1) 5950:25 interpreting (1) 6119:18 interrupt (3) 5959:23;6006:23; 6078:22 intersection (1) 5955:23 interstate (1) 6026:12 interval (1) 5961:23	into (111) 5931:1;5938:15, 16;5939:2,9,15,22; 5940:15;5941:17; 5943:4;5954:3; 5957:17;5960:3,17, 20;5964:24; 5966:25;5976:11; 5983:7;5986:10; 5988:1;5997:5,7,9, 13,14,16;6000:4,5, 10,19,21;6001:4; 6002:6;6003:7; 6004:8;6005:25; 6006:4,7;6008:2; 6013:1,6;6015:1,3; 6017:4;6018:9,13; 6022:23,25;6023:21; 6033:24;6035:21; 6037:4,4;6040:14, 15,17;6042:5,19,21, 25;6045:20,21; 6046:12,21;6049:12; 6053:7;6054:4; 6061:13;6063:7; 6064:4;6067:7,10; 6071:9;6072:7,21; 6076:21;6078:21; 6079:3;6081:21; 6082:1,7,15;6091:8, 9,11;6095:6; 6096:23;6097:2,7,8, 24;6102:14;6105:21, 24;6106:5;6107:14; 6111:15;6112:16; 6113:4;6118:12,20; 6119:21;6120:6,19, 21,24;6121:4,18,21; 6131:20 intrigued (1) 6068:21 introduce (1) 6036:1 introduced (1) 5976:11 Introduction (2) 5938:1;6101:21 invest (3) 5970:7;6082:10, 24 invested (1) 6105:5 investment (5) 5970:5;6031:2; 6082:18;6083:2; 6084:10 invite (4) 5930:9;6077:8; 6078:1;6130:17 involved (7) 5976:10;6005:17; 6010:14;6015:1; 6033:21;6080:17;
---	---	---	---	--

<p>6112:23 Iowa (1) 6075:22 irrationality (1) 6021:3 isolate (2) 6046:2;6082:2 isolated (1) 5955:6 issue (15) 5933:7,15;5934:8, 10;5958:8;6005:11; 6024:14,16;6048:16; 6059:1;6070:16; 6075:22;6126:14; 6127:18;6132:17 issues (11) 5930:22;5938:20; 5939:4;5948:25; 5976:7;6021:5; 6025:19,25;6026:17; 6110:17,17 Italian (1) 6011:24 Italians (1) 6012:21 Italian-style (1) 6011:20 item (1) 5952:11 items (1) 6052:13 iteration (2) 6005:25;6020:14 IV (5) 5957:16;6022:15; 6033:18,21;6070:24</p>	<p>5971:9;5985:11; 6079:16,22 Joe (5) 6077:19;6078:12, 25;6118:6;6122:15 J-O-E (1) 6078:12 John (7) 5929:15;6028:6; 6042:6;6057:24; 6065:18;6100:17,24 joining (1) 6130:20 J-O-N-G (1) 5929:12 Joseph (18) 6077:19;6079:2,3; 6080:23;6081:6,15; 6082:5;6084:19,22; 6088:10;6089:15; 6101:5;6118:12; 6120:24;6121:12,14, 17,20 journals (1) 5947:24 JUDGE (164) 5927:2,7;5930:4, 14,20;5931:20; 5934:11;5935:9; 5936:13,17,22; 5937:1,8,17;5938:2; 5944:23;5945:6; 5949:11,16;5951:5, 10,20;5952:2; 5959:23;5960:8; 5962:1,5;5964:5,8, 10,13,19;5965:16; 5966:3,14;5967:2,8, 25;5968:12; 5970:21;5971:5,9, 16,22;5972:4,11; 5974:25;5975:2,4,7, 9,11;5976:25; 5977:4,8,16; 5981:13,24;5984:12, 14,16;5988:3; 5995:3;5996:1,6,14, 20,23;5997:3,10,17; 6002:13,22;6003:2, 4,8,14,23;6004:3; 6026:24;6027:5,12, 15,20;6028:2; 6031:20;6033:4,9, 11;6047:15,20; 6051:4,8;6056:16; 6057:11;6061:8,17; 6068:21;6069:6,14; 6070:6;6077:6,12, 15,21,25;6078:6,11, 14;6083:6,12,20,22; 6084:5;6085:2; 6089:19,21;6090:2, 7,10,14,21,24;</p>	<p>6091:6,18;6098:11, 18,21,25;6099:6,17, 20,22,25;6100:2,5,8, 14,23;6103:24; 6115:13,16,18,23; 6116:1,7,12;6118:2; 6122:11;6123:8; 6127:14,16;6130:16, 23;6131:1,7,11; 6132:21,23;6133:8; 6134:1,6,10,12 Judge's (1) 6057:17 judgment (2) 5976:2;6023:18 judgments (2) 6052:7,10 July (2) 6099:2;6103:5 jump (1) 5981:25 justice (1) 6073:15</p>	<p>5933:25 knowledge (2) 6001:15;6059:5 known (12) 5931:24;5935:4; 5938:23;5982:15; 5986:9,14;6077:17, 18,18;6131:23,23,24 known's (1) 5932:24 knows (6) 5935:7;6032:19, 22;6033:14,14,19 Korea (1) 6095:24 Kosher (7) 6116:11,18; 6122:18,20,20,22,23 krieking (5) 5983:16,19; 5984:12,13;6019:16 K-R-I-E-G-I-N-G (2) 5983:19;5984:13</p>	<p>larger (10) 5961:15;5980:8; 5983:2;6001:21; 6024:2;6042:25; 6054:23;6061:14; 6129:4,14 largest (5) 5970:6;5980:24; 6044:6;6069:4; 6113:8 last (35) 5929:22;5955:1; 5964:20;5969:12; 5971:1,2,6,7;6030:6; 6045:16,18;6054:2; 6071:8;6074:3; 6082:21;6087:19; 6088:3;6089:22; 6090:1,2,7,8;6091:4; 6093:5;6106:9; 6109:7,8;6110:3,16; 6111:2;6112:7; 6116:17;6126:25; 6127:9;6131:24 late (1) 6129:19 later (8) 5937:11;5966:10; 5976:11;5991:8; 6081:5;6101:13; 6104:17;6131:21 launch (1) 6017:20 launching (1) 6017:21 Laurel (3) 5927:23;5930:23; 6127:25 Lauren (1) 5928:9 Law (4) 5927:7;5928:16, 24;5929:22 laws (1) 6087:10 lawyer (1) 5996:24 leaf (1) 5990:8 learning (3) 6114:15;6126:18, 19 least (41) 5933:14;5934:10; 5945:10,19;5946:9, 18,21;5950:7; 5955:1;5974:7,20; 5975:22;5983:9; 5985:22;5995:23; 6004:13;6015:9; 6019:25;6024:13; 6025:1;6026:2,3,18; 6031:24;6032:10,25;</p>
<p>J</p> <p>JABLONSKI (1) 5928:21 J-A-B-L-O-N-S-K-I (1) 5928:21 Jack (2) 6081:22;6129:10 James (2) 5929:12;5949:5 January (10) 5965:2,13;5967:7; 5988:23;6083:3,8; 6092:6,17;6110:10, 19 Japan (4) 6087:8;6095:18, 21,24 Jersey (1) 6044:25 Jerseys (1) 6114:7 Jill (1) 5927:6 job (4)</p>	<p>K</p> <p>Kansas (3) 5928:4;5987:3; 6080:1 keep (4) 5982:3;6062:1; 6069:20;6133:3 Kelly (1) 5930:18 K-E-L-L-Y (1) 5930:18 kill (1) 5933:18 kind (21) 5986:15;5999:6; 6004:8;6009:10; 6012:22;6024:21; 6037:19;6046:3; 6048:11,12;6066:17; 6076:13;6083:23; 6098:17;6099:12; 6105:20;6108:4,14; 6124:9;6125:16; 6128:23 kinds (4) 5946:16;6008:3; 6052:8;6066:24 King (1) 6075:23 kitchen (1) 6067:2 Kluesner (1) 6132:1 K-L-U-E-S-N-E-R (1) 6132:1 knew (1) 6090:22 knowing (1)</p>	<p>L</p> <p>labeled (2) 6035:7;6089:17 labelled (1) 6053:3 labels (1) 6130:3 labor (2) 5943:3;6051:2 lack (1) 5985:18 lactose (1) 6107:13 laid (1) 5999:11 Lakes (1) 6017:5 Land (4) 5928:14,20; 6082:16;6112:14 land-spreading (1) 5960:22 lanes (1) 6082:14 laptop (1) 5995:4 large (25) 5943:12;5970:12, 13;5971:2;5980:15, 16,17;5981:4; 5982:21,23;6001:3, 22,22,24;6011:22; 6041:25;6054:18,19; 6082:18;6087:16; 6088:4;6096:7; 6112:7,13;6130:11 largely (1) 6056:8</p>	<p>late (1) 6129:19 later (8) 5937:11;5966:10; 5976:11;5991:8; 6081:5;6101:13; 6104:17;6131:21 launch (1) 6017:20 launching (1) 6017:21 Laurel (3) 5927:23;5930:23; 6127:25 Lauren (1) 5928:9 Law (4) 5927:7;5928:16, 24;5929:22 laws (1) 6087:10 lawyer (1) 5996:24 leaf (1) 5990:8 learning (3) 6114:15;6126:18, 19 least (41) 5933:14;5934:10; 5945:10,19;5946:9, 18,21;5950:7; 5955:1;5974:7,20; 5975:22;5983:9; 5985:22;5995:23; 6004:13;6015:9; 6019:25;6024:13; 6025:1;6026:2,3,18; 6031:24;6032:10,25;</p>	

6033:15;6041:10,24; 6045:23;6048:11; 6049:15;6050:10,17; 6052:10;6056:25; 6062:11,23;6085:6, 10;6086:1 least-cost (1) 5943:9 leave (3) 5979:8;5981:13; 6133:22 led (2) 6021:4;6026:13 left (7) 5977:9;6004:6; 6046:25;6047:19; 6083:6;6097:18,19 legal (1) 6103:20 length (1) 5929:3 less (17) 5950:20;5956:19; 5959:5,20;5960:13; 5963:8;5992:6; 6037:6;6047:1; 6066:7;6087:22; 6089:12;6116:4; 6117:22;6120:21; 6126:11;6127:10 letter (1) 6102:20 letting (2) 5983:24;6071:17 level (18) 5938:24;5940:13; 5945:13;5954:9,20; 5956:13;5958:2; 5988:22;5993:25; 5994:3;6007:8; 6021:6;6052:25; 6053:13;6055:4; 6066:21;6076:20,23 levels (10) 5938:9;5967:17; 5969:18;5993:15; 6024:20;6032:9; 6053:4,9;6070:2; 6071:22 levity (1) 5987:4 lift (1) 6020:4 light (2) 6048:17,19 lighter (1) 5930:3 liked (1) 6131:1 likelihood (1) 6059:23 likely (8) 5970:1;6037:5,7;	6042:2;6046:11; 6066:5;6132:18; 6133:16 likewise (2) 5946:5;6038:20 limitation (1) 6010:13 limitations (2) 6119:4,22 limits (3) 5942:21,23; 5943:19 line (24) 5931:2;5945:14; 5954:22;5961:16,17; 5968:10;5971:1,6; 5980:19;5981:9,15; 5994:11;5999:19; 6042:16;6044:19,24; 6050:4;6052:13; 6054:2;6056:12; 6065:5;6089:23,25; 6090:9 lines (29) 5933:14;5944:4,6, 8,10,11;5945:18,20, 24;5946:12;5955:23, 23;5981:3,8,10,14, 19;5995:20,22; 6013:25;6015:9; 6037:14;6045:18; 6048:17;6049:11; 6056:2;6066:11,13; 6070:14 liquid (7) 5969:1;6004:7; 6056:2,6;6082:15; 6115:25;6116:7 list (5) 5934:20;5991:16; 5992:21;6042:25; 6051:19 listed (2) 5989:21;6049:2 listen (1) 5932:8 listing (1) 5972:9 lists (1) 6013:4 little (42) 5930:2,4,7; 5933:18;5936:22; 5948:20;5958:3,12; 5959:24;5962:3; 5963:8,9;5966:10; 5970:22;5972:10,12; 5980:5,21;5981:14; 5990:19;5991:19; 5992:6;5995:15; 6031:19;6034:18,18; 6054:8;6055:6; 6070:3,12;6079:7;	6081:8;6097:4,18; 6098:8;6100:4; 6109:7;6116:3; 6119:8;6128:20; 6131:6;6133:21 live (1) 5931:4 livestock (1) 5960:23 Livingston (1) 6098:16 loaded (1) 5962:13 loads (3) 5942:21;6087:20; 6124:19 loaves (1) 6124:10 local (12) 5932:5;5944:7,14; 5945:25;5946:7; 5953:24;5960:22; 6034:3;6070:16; 6072:4,13;6133:15 locally (3) 5980:21;6065:16; 6072:7 located (10) 5953:3;5958:25; 6052:1;6067:14; 6069:16;6080:23; 6086:22,24;6098:12, 13 location (36) 5941:20,22,25,25; 5943:25;5945:11,20; 5948:9;5950:11,24; 5951:2;5960:7; 5980:5,6;5981:5,6, 18;5982:15,17,22; 5984:9;5985:14; 6009:24;6016:7; 6017:16;6019:5; 6031:24;6038:2,5,6; 6064:9,11,25; 6072:1;6080:24; 6086:6 locations (30) 5939:25;5941:17, 20;5942:10,18,20; 5944:8,10,21; 5945:16,23;5946:10, 14;5948:17,19; 5949:23,24;5950:12; 5951:14,18;5952:23; 5953:7,16;5985:2; 5991:13;6008:20; 6014:4;6049:21; 6050:12;6065:20 logic (1) 6004:10 long (22) 5955:12;5958:1;	5969:25;5977:4; 6017:15;6026:18; 6027:13;6032:12; 6057:24;6058:1; 6066:11,13;6070:4, 21;6100:16; 6105:16;6110:2; 6120:25;6129:9; 6130:20;6131:2,15 long-distance (1) 6049:14 longer (4) 5987:11;6036:15; 6084:15;6121:18 long-term (2) 6082:25;6084:9 look (60) 5933:11;5934:6; 5935:12;5946:17; 5947:3,4;5951:13; 5965:21;5972:16; 5976:8;5978:9; 5979:18;5980:1,7; 5981:14;5982:4; 5985:11;5991:10; 5992:19;5993:23,25; 5994:10,18;5995:22; 6001:18,19;6004:22; 6007:10;6008:14; 6009:12;6010:4,21; 6012:3;6013:24; 6016:6;6020:3; 6023:24;6024:13; 6033:23;6035:9; 6037:24;6048:13,13, 17;6055:11; 6058:16;6063:6; 6068:10;6069:6; 6071:7;6073:4; 6075:9;6076:9; 6085:5,25;6086:3; 6090:11;6116:22; 6123:4;6128:9 looked (18) 5974:15,18; 5994:21;5995:20; 6027:1,1;6049:5; 6054:9;6087:2; 6092:13;6102:16; 6110:17;6112:3; 6117:24;6120:20; 6121:7;6122:7; 6123:2 looking (38) 5931:16;5933:15, 17;5962:1;5976:4, 25;5978:25;5980:4, 23;5982:6;5993:14, 24;5995:1;6010:15; 6013:3;6023:18; 6029:19;6032:18; 6034:17;6037:5; 6046:25;6052:6;	6061:1,6,15; 6063:21;6064:1,3; 6066:16;6070:21; 6072:3;6073:15; 6074:14;6091:25; 6092:3;6095:3; 6104:24;6105:20 looks (11) 5994:10,21; 5995:16,20,25; 6034:19;6047:1; 6063:3;6066:16; 6069:9;6133:25 Los (9) 5980:9,13,14,19, 22;5981:10;6044:20, 21;6045:15 losers (2) 6071:16;6076:5 losing (3) 5955:5;5992:14; 6040:2 loss (1) 6028:25 losses (8) 5969:23;6023:10; 6031:13;6058:2; 6059:4;6088:5,5; 6112:8 lost (3) 6000:3;6040:19, 21 lot (27) 5933:18;5972:6; 5980:11;5990:22; 6005:7;6012:10; 6025:14;6031:9; 6059:1;6074:11; 6093:18,19;6094:2, 2;6107:13;6111:9, 10,13,13,14,16; 6112:23;6114:23; 6127:6,7,11;6129:4 lots (2) 5970:23,24 louder (1) 5930:4 Louisiana (1) 5982:7 love (3) 6046:15;6099:6; 6114:16 low (10) 5956:8;5957:1,10; 5965:14;6007:23; 6051:1;6070:4; 6094:1;6113:12; 6124:9 lower (19) 5941:9;5956:21; 5957:10,22;6038:20; 6060:14;6068:6,18, 18;6073:22;6074:9;
--	---	--	---	---

<p>6076:24;6087:24; 6098:8;6114:9; 6119:24;6120:3,14; 6121:1 lowest (11) 5939:23;5952:9; 5957:7;5958:2; 5993:25;5995:13,14, 15;6014:13;6018:2; 6032:12 Low-Value (1) 5953:1 low-valued (1) 5950:2 LP (1) 6079:1 luck (1) 5995:10 lump (1) 6012:22 lunch (6) 5934:15;6027:6,8, 12,16;6132:9</p>	<p>9;6054:21;6066:6; 6073:15,20;6074:1; 6077:1;6088:16; 6096:25;6101:3,6; 6102:2;6112:21,22 management (1) 6079:6 managers (1) 6099:16 managing (1) 6079:24 mandatory (1) 5939:2 manner (6) 6000:5,7;6004:1, 1;6033:1;6060:6 manufacture (6) 5941:3;5950:13; 6038:12;6064:11; 6072:19,21 manufactured (11) 5948:4;6003:17; 6020:13;6021:25; 6022:6;6029:18,20; 6066:17;6070:17,24; 6071:13 manufacturer (5) 5929:14;5950:19; 5966:2;6038:12; 6072:2 manufacturers (2) 5958:6;6058:21 manufacturing (21) 5942:5;5949:24; 5951:19;5957:8,17, 25;5969:16; 6003:22;6021:20; 6028:12,24;6029:23; 6030:8;6042:1; 6064:12;6073:9,10; 6076:4;6088:2; 6116:20;6117:22 many (44) 5938:25;5947:17; 5955:19;5958:12; 5962:19;5969:9; 5970:15;5981:10; 5984:22;5987:19; 5998:10,11;6000:3, 9,15;6002:17; 6004:6;6006:1; 6009:7;6014:14; 6027:7,9;6029:1; 6042:22;6054:5,15; 6056:11,18;6058:18; 6059:6,7;6060:16; 6069:9,20;6074:3; 6081:5;6083:1; 6086:18;6087:20,23; 6088:1;6109:22; 6111:11;6128:6 map (15) 5950:1,4,23;</p>	<p>5951:22;5952:10; 5953:4;5954:23; 5955:4;5981:21; 5996:11;6019:7; 6020:9;6031:25; 6034:17;6044:15 mapped (1) 5984:1 mapping (4) 5983:19,25; 6019:15;6035:6 maps (10) 5940:19;5944:17; 5945:9;5947:2,3; 5979:18,19;5994:6, 19;6065:4 March (12) 5944:2,14; 5945:12;5952:6; 5953:1,12;5962:10; 5979:24;5987:8; 5995:12;5996:9; 6032:1 Margin (4) 6074:14;6075:18; 6076:10,17 marginal (12) 5948:8;5952:6,9, 12,25;6038:5,20; 6048:13;6061:23; 6062:20;6064:2,24 Mark (8) 5930:12;5936:24; 5937:23;5949:6; 5997:21;6026:8,22; 6078:2 M-A-R-K (2) 5930:12;5936:25 marked (2) 5936:16;6078:5 Market (52) 5928:3;5956:7,14; 5957:9;5969:18; 5975:15;5985:7,13; 6024:20;6025:19,25; 6026:5;6029:14; 6030:6,11,14; 6031:5;6045:23; 6057:23;6064:25; 6069:10;6070:18; 6071:22;6079:5; 6081:17,25;6083:24; 6084:17;6086:5,12; 6089:3,8,13; 6096:17,19;6107:17; 6114:24,24;6115:1, 20;6119:15;6120:10, 25;6122:18,20; 6125:11,17,17; 6128:9;6129:6,6,14 marketable (2) 6040:11;6042:5 marketed (2)</p>	<p>5956:20;6037:12 Marketing (37) 5927:17,20,22; 5928:8;5938:4,20; 5939:7;5952:19; 5955:10,15;5956:17; 5965:22;5967:5; 5974:10;5988:11; 6022:2;6024:3; 6025:14,21;6026:6; 6030:23;6043:9; 6058:13;6059:18; 6061:10,11;6076:4; 6077:3;6082:21; 6086:14;6087:9,12, 13,15;6099:16; 6102:17;6129:3 market-oriented (1) 6088:25 marketplace (10) 6015:2;6026:2; 6029:3,13;6060:5; 6072:23;6084:4,8; 6119:23;6127:8 markets (57) 5939:2,8,12; 5948:24;5949:8,12, 12,15;5951:24; 5953:8;5955:24; 5956:3,15;5957:1,6; 5969:17;5976:11; 5977:13,15;5994:19; 5996:4;6016:17; 6017:4,6;6024:17; 6026:3,19;6030:5; 6060:8,8,10,17; 6069:21,24;6070:1, 3,15;6071:23; 6072:5,7,12,13,14; 6084:16;6086:12,15, 25;6087:2,5; 6118:25;6119:5,12, 16,16,21;6125:20; 6126:3 market's (1) 6115:4 marking (2) 5936:11,13 Marv (5) 5976:17;5997:22; 6020:2;6023:16; 6025:12 marvelous (1) 5971:9 Marvin (11) 5928:11;5934:12; 5975:10;5997:20; 5999:7;6017:18; 6057:15;6058:16; 6060:24;6122:14,19 M-A-R-V-I-N (1) 5928:11 mass (2)</p>	<p>5992:17;6006:19 Master's (2) 5937:5,6 match (1) 5942:12 matches (2) 5947:9;5955:25 material (1) 5971:12 materially (2) 5979:23;5980:2 math (1) 6117:18 mathematical (1) 5939:19 matter (8) 5956:3;5984:23; 6031:1;6036:5; 6065:14;6091:1; 6104:7;6110:23 mattered (1) 6075:8 matters (4) 5931:22;5932:14; 5936:6;5952:8 maximization (1) 6008:6 maximize (1) 6108:8 maximizing (1) 6008:10 MAY (63) 5927:23,23; 5930:23,23;5931:1, 3;5933:1,9;5934:25; 5951:4,8;5956:25; 5957:10,13;5959:23; 5960:5;5971:25; 5972:1,8,13; 5973:25;5975:3,6; 5976:22;5992:20; 5993:24;5995:3,21; 5996:17;6018:1; 6026:11,11,13; 6034:14,14;6045:6; 6047:16;6056:24,25; 6057:6;6058:9; 6062:2;6071:10; 6072:18,20;6076:17; 6077:15;6078:15; 6081:10;6085:24; 6093:13;6097:4; 6107:14,22;6113:19, 22;6127:24,25; 6129:2;6130:10; 6132:7,19,21 maybe (31) 5933:17,23; 5934:15;5935:25; 5967:21;5972:11; 5974:7;5976:21; 5979:3;5980:4; 5982:8;5990:14;</p>
M				
<p>macro (1) 6073:7 macroeconomic (1) 6073:18 Madison (2) 5937:25;5972:25 main (2) 5962:1;6084:25 Maine (3) 6080:8;6086:8; 6127:6 maintain (3) 6082:17;6085:2,4 maintaining (1) 5932:5 major (3) 5957:4;6016:15; 6044:8 majority (2) 6000:12;6027:12 maker (7) 5965:7,24; 6040:10,12;6081:16, 18;6098:5 makers (5) 5976:16;6015:7; 6064:14;6095:20; 6096:7 makes (5) 6014:19;6065:11; 6107:13;6109:7,9 making (26) 5934:2;6003:1; 6004:2,7;6007:20, 23;6028:17; 6031:10;6038:22; 6039:15,18;6052:7,</p>	<p>5951:22;5952:10; 5953:4;5954:23; 5955:4;5981:21; 5996:11;6019:7; 6020:9;6031:25; 6034:17;6044:15 mapped (1) 5984:1 mapping (4) 5983:19,25; 6019:15;6035:6 maps (10) 5940:19;5944:17; 5945:9;5947:2,3; 5979:18,19;5994:6, 19;6065:4 March (12) 5944:2,14; 5945:12;5952:6; 5953:1,12;5962:10; 5979:24;5987:8; 5995:12;5996:9; 6032:1 Margin (4) 6074:14;6075:18; 6076:10,17 marginal (12) 5948:8;5952:6,9, 12,25;6038:5,20; 6048:13;6061:23; 6062:20;6064:2,24 Mark (8) 5930:12;5936:24; 5937:23;5949:6; 5997:21;6026:8,22; 6078:2 M-A-R-K (2) 5930:12;5936:25 marked (2) 5936:16;6078:5 Market (52) 5928:3;5956:7,14; 5957:9;5969:18; 5975:15;5985:7,13; 6024:20;6025:19,25; 6026:5;6029:14; 6030:6,11,14; 6031:5;6045:23; 6057:23;6064:25; 6069:10;6070:18; 6071:22;6079:5; 6081:17,25;6083:24; 6084:17;6086:5,12; 6089:3,8,13; 6096:17,19;6107:17; 6114:24,24;6115:1, 20;6119:15;6120:10, 25;6122:18,20; 6125:11,17,17; 6128:9;6129:6,6,14 marketable (2) 6040:11;6042:5 marketed (2)</p>	<p>5956:20;6037:12 Marketing (37) 5927:17,20,22; 5928:8;5938:4,20; 5939:7;5952:19; 5955:10,15;5956:17; 5965:22;5967:5; 5974:10;5988:11; 6022:2;6024:3; 6025:14,21;6026:6; 6030:23;6043:9; 6058:13;6059:18; 6061:10,11;6076:4; 6077:3;6082:21; 6086:14;6087:9,12, 13,15;6099:16; 6102:17;6129:3 market-oriented (1) 6088:25 marketplace (10) 6015:2;6026:2; 6029:3,13;6060:5; 6072:23;6084:4,8; 6119:23;6127:8 markets (57) 5939:2,8,12; 5948:24;5949:8,12, 12,15;5951:24; 5953:8;5955:24; 5956:3,15;5957:1,6; 5969:17;5976:11; 5977:13,15;5994:19; 5996:4;6016:17; 6017:4,6;6024:17; 6026:3,19;6030:5; 6060:8,8,10,17; 6069:21,24;6070:1, 3,15;6071:23; 6072:5,7,12,13,14; 6084:16;6086:12,15, 25;6087:2,5; 6118:25;6119:5,12, 16,16,21;6125:20; 6126:3 market's (1) 6115:4 marking (2) 5936:11,13 Marv (5) 5976:17;5997:22; 6020:2;6023:16; 6025:12 marvelous (1) 5971:9 Marvin (11) 5928:11;5934:12; 5975:10;5997:20; 5999:7;6017:18; 6057:15;6058:16; 6060:24;6122:14,19 M-A-R-V-I-N (1) 5928:11 mass (2)</p>	<p>5992:17;6006:19 Master's (2) 5937:5,6 match (1) 5942:12 matches (2) 5947:9;5955:25 material (1) 5971:12 materially (2) 5979:23;5980:2 math (1) 6117:18 mathematical (1) 5939:19 matter (8) 5956:3;5984:23; 6031:1;6036:5; 6065:14;6091:1; 6104:7;6110:23 mattered (1) 6075:8 matters (4) 5931:22;5932:14; 5936:6;5952:8 maximization (1) 6008:6 maximize (1) 6108:8 maximizing (1) 6008:10 MAY (63) 5927:23,23; 5930:23,23;5931:1, 3;5933:1,9;5934:25; 5951:4,8;5956:25; 5957:10,13;5959:23; 5960:5;5971:25; 5972:1,8,13; 5973:25;5975:3,6; 5976:22;5992:20; 5993:24;5995:3,21; 5996:17;6018:1; 6026:11,11,13; 6034:14,14;6045:6; 6047:16;6056:24,25; 6057:6;6058:9; 6062:2;6071:10; 6072:18,20;6076:17; 6077:15;6078:15; 6081:10;6085:24; 6093:13;6097:4; 6107:14,22;6113:19, 22;6127:24,25; 6129:2;6130:10; 6132:7,19,21 maybe (31) 5933:17,23; 5934:15;5935:25; 5967:21;5972:11; 5974:7;5976:21; 5979:3;5980:4; 5982:8;5990:14;</p>	

5992:13;5995:21,23; 5999:24;6000:2; 6005:10;6017:2; 6019:5;6022:5; 6031:6;6037:4; 6044:2;6057:2; 6072:18;6076:22,25; 6093:12;6113:6; 6132:9 mean (38) 5933:18;5935:6, 15;5961:23; 5973:11;5975:19; 5984:18;5998:10; 6002:10;6003:14,16; 6006:9;6010:15; 6014:1,7,24; 6015:11;6018:8; 6019:1,4;6022:1; 6029:4,5;6031:6; 6035:14;6053:22; 6058:4;6072:12; 6073:8;6086:19; 6088:12,12;6093:21; 6113:19;6118:17; 6119:25;6123:23; 6132:15 meaning (2) 5950:22;6128:3 meaningless (1) 5957:11 means (8) 5945:24;5990:13; 5991:13;5994:4; 6032:10;6045:22; 6056:5;6075:3 meant (2) 6042:18;6053:17 measure (1) 6076:15 measured (1) 5969:13 measuring (1) 6062:21 mechanism (2) 5956:22;6094:9 mechanisms (1) 6055:8 medium (3) 6084:14;6088:1; 6089:11 medium-size (1) 5970:4 meet (5) 5942:8;5943:11; 6001:15;6087:22; 6088:17 meeting (3) 5989:9;5990:12; 6028:23 meets (1) 6043:25 Megan (3)	5928:15,16; 6104:3 M-E-G-A-N (1) 5928:16 member (3) 5956:22;6030:5; 6102:21 Members (9) 5939:1;5969:24; 5973:23,24;5975:22; 6023:11;6024:16; 6028:18;6030:10 mention (6) 5931:23;5932:1; 5934:4;6062:23; 6094:16;6105:4 mentioned (17) 5933:15;5975:21; 6013:3;6025:1; 6043:20;6056:18,21; 6084:1;6095:17,22; 6100:8;6104:15; 6105:9;6106:22; 6109:19;6118:10; 6129:23 Merced (3) 6098:13,14,15 mercy (2) 6084:4,8 Meredith (1) 5927:25 messy (1) 5946:15 met (2) 6018:22;6102:17 methane (2) 6082:12;6105:9 method (3) 5938:24;5968:7; 6115:8 methodology (1) 5983:19 methods (3) 5968:2,6;5983:17 Metropolitan (1) 6016:19 Mexico (27) 5981:15,16,18; 5982:9,23;5998:24; 6082:7;6083:25; 6086:11,12;6087:3; 6118:22;6119:1,23; 6120:7,19,22,25; 6121:4,10,18,21; 6125:7,18,19; 6126:13;6130:1 mic (2) 5930:5;5936:23 Michigan (2) 6080:2,3 microphone (1) 5931:3 mid-1990's (1)	5938:21 mid-80's (1) 6004:20 mid-afternoon (1) 6131:14 middle (12) 5961:13,13,22; 5991:22;6007:10; 6017:1;6086:18,20; 6119:1,1;6121:9,11 Mideast (2) 5998:16;6051:23 mid-sized (1) 5970:11 Midwest (17) 5928:7;5950:12, 20,21;5998:14; 6016:16,25;6051:22; 6067:16;6072:20; 6086:3,7,24; 6087:24;6090:12; 6128:3,6 might (41) 5933:1,24; 5934:19;5936:1; 5937:9;5950:5; 5958:19;5961:11; 5969:8;5970:4; 5976:23;5996:16; 6011:21;6013:12; 6018:23;6019:20; 6021:8;6036:1,12; 6037:5;6048:15; 6049:25;6078:22; 6081:5;6084:23; 6088:12;6093:1,7; 6098:8;6109:4; 6114:2;6120:9; 6121:9;6124:1; 6126:6,6,10,11; 6129:1,15;6132:25 Mike (3) 6099:3,15; 6102:16 mileage (1) 5942:17 miles (15) 5961:2,3,6,7,7; 5962:2,2,3;6081:1; 6098:14,15,16; 6124:22,23,23 milk (345) 5927:4;5928:7; 5929:14;5930:1; 5937:21;5938:4,15, 18,20,21;5939:21, 24;5940:2,5,7,9,10, 13,15,24;5941:2,2,5, 9,9,19,25;5942:3,7, 22,25;5943:10,15, 17,24;5944:5,7,14, 16;5945:11,14,17, 21,25,25;5946:19;	5948:5,6,9,11,12,13, 14,19,22,23; 5949:15,22,24; 5950:10,13;5951:16, 18;5952:6,9,13,19, 22,25;5953:11,16, 18,20,23,24,25; 5954:2,3,4,5,8,11,13, 15,17,18,20,23,25; 5955:2,5,10,11,11, 12,15,18,19; 5956:11,15,20,21; 5957:2,7,14,16,17, 17,18,18,20,21; 5958:8,10;5959:3,5, 7,9,10,14,15,21; 5960:14,16,19; 5961:20;5962:9; 5963:11,18;5965:11, 22,25;5967:5; 5969:14,25;5974:10; 5980:19;5981:17,20; 5987:13,13,21; 5988:11;5990:24,24; 5992:10;5993:13; 5999:17,20,24; 6000:1,15,20; 6001:2;6003:7; 6006:8;6007:7; 6008:2;6009:10; 6016:15;6017:11; 6018:4;6019:19; 6020:19,21;6021:1, 6,20;6022:2;6024:1; 6026:5,7,13,18; 6028:18;6029:5,8, 17;6030:1,9; 6031:15;6032:23,25; 6033:6,15,23; 6034:3,3,4,8;6035:6, 16;6037:3,10; 6038:1,5,6,10,12,18, 20,21,23;6039:8,9, 10,16;6043:9,14,23, 23;6048:12;6050:4, 5;6052:6;6054:3,19; 6056:9,19,24,25; 6057:1,8,9;6059:2, 18;6060:4,14; 6061:24;6062:4,7,8, 9,18,20;6063:4,7,23; 6064:2,4,5,10,24; 6069:22;6070:11,24; 6071:2,4,11,13; 6072:19,21;6073:2; 6074:2,5,18;6076:4, 4;6077:2;6079:2,15; 6080:19;6081:4,20, 23;6084:20,21,24; 6086:14;6087:11,12, 13,16,17,20,22,23; 6088:1,3,13,18,18; 6089:10,13;6091:24;	6095:6;6099:10,11; 6100:3;6101:8,9,16; 6102:2,17;6103:7, 10,13,14,14,15,16, 17;6104:20;6106:12, 13,16,19,20,22,23, 24;6111:14;6112:2, 4;6113:4,9,15,24; 6114:1,8,9,9;6115:4; 6117:4,9;6118:8,11, 11,16,18,20; 6119:24;6120:3,14, 15,24;6121:1,18,19; 6122:4;6126:21; 6127:1,2,10,11 milked (1) 6056:19 milking (1) 6105:2 milks (3) 6081:3;6084:1; 6118:13 million (19) 5959:7,9,9,10; 5960:16,18;5963:18; 6000:1,15,15; 6008:22;6053:7; 6054:3,6,10,13,18; 6081:20;6118:16 millions (1) 6082:17 Miltner (5) 6091:19,24; 6110:8;6116:13,15 mimic (2) 5955:16;6055:24 mind (6) 5935:1;5982:4; 6002:18;6028:9; 6062:1;6102:14 mine (3) 5930:6;5936:13; 6083:13 minimal (7) 5948:19;6018:4,5, 6,7;6053:1,22 minimize (1) 6008:3 minimizing (2) 5944:14;6008:5 minimum (22) 5955:13,14,20; 5956:6,12,13,25; 5957:6,10;5988:11; 6021:18;6024:20; 6058:24;6060:3; 6068:17;6071:13,22; 6073:22;6087:10,11, 18;6127:3 minimums (1) 6126:21 Minnesota (3) 6017:2,21,22
--	---	---	--	--

<p>Minnesota-Wisconsin (1) 5938:22 minus (3) 5947:19;6047:8; 6056:6 minute (2) 5996:13;6013:25 minutes (3) 6027:3,6,10 missed (3) 5999:24;6018:1, 24 Missouri (2) 6080:1;6131:4 misstate (1) 5972:13 mix (4) 5939:25;6030:16; 6061:3;6097:24 mixed (1) 6012:5 model (192) 5939:14,20,24; 5940:17,23;5942:13, 18,24;5943:5,7,16, 21,25;5944:2,18,18, 20,22;5945:17; 5946:5,18;5947:9, 18,21,22;5952:4,17; 5953:3,5,13;5962:7; 5973:13,15,16; 5974:17;5976:10; 5978:18,21,21,23; 5979:2,7;5982:5,10, 13;5983:5,13; 5984:7,10,25; 5985:3,4,8,14; 5987:8,12,24; 5989:5,12;5990:20, 20,22;5991:3,6,8,11, 15,21;5992:2,8,15, 18;5993:13,18; 6005:22,25;6006:4, 7,19,21,22,24; 6007:2,3,3,4,4,14,15, 20,22;6008:1,17,21, 22,25;6009:4,14,20, 22;6010:1,14,15,16; 6011:9,10;6013:17, 20;6014:10;6015:1, 3,5;6017:14;6018:2, 16,18;6019:3; 6020:5;6021:10,11; 6028:13,14,25; 6031:25;6032:4,4,6, 13,18,19,22,25; 6033:13,19,22; 6034:1,4,5;6035:11, 15;6036:6,17,24; 6037:18,18,23; 6038:4,15;6039:25; 6040:5;6042:17,18, 22,23;6043:22,24,</p>	<p>24;6044:3,9,12,15; 6045:2;6048:4,22; 6049:9,10,11,15,17; 6050:1,7,13,19; 6059:13;6061:15; 6064:13,14,20,21; 6065:17;6066:2,3,5, 17;6067:3,11,15,20, 23;6068:5;6073:4; 6074:12 modeled (3) 5942:12,15; 6010:24 model-generated (8) 5947:10,14; 5950:1;5951:4,7; 5952:24;6061:23; 6062:2 modeling (4) 5976:1;6006:10, 25;6068:24 models (2) 5993:8;6022:21 model's (9) 5943:9;5973:19; 5981:23;6007:11; 6019:8,11;6032:11; 6040:1;6050:24 modification (1) 6132:11 modifications (3) 5939:6,10; 6059:21 moisture (2) 6098:2,4 moment (3) 6006:3;6033:10; 6075:13 momentum (1) 6020:25 Monday (4) 6051:7,12; 6052:22;6099:5 monetary (1) 5943:24 money (3) 6094:2,4;6113:2 monies (2) 6061:14;6112:16 Monterey (1) 6081:22 month (12) 5940:1;5943:6; 5965:23;5986:13; 5988:18;6032:7; 6047:6;6093:3,13; 6103:1,1;6121:8 monthly (2) 5938:24;5947:12 months (14) 5942:12,15; 5944:3;5946:23; 5947:16;5952:4;</p>	<p>5966:8;5988:19,22; 5989:6;6047:7; 6092:10;6093:5,13 more (92) 5933:18;5935:14; 5936:22;5938:7; 5941:21;5942:7; 5944:14,15;5948:11, 17;5950:19;5951:6; 5953:19,20,24; 5954:20;5956:15; 5959:10;5960:6,18; 5962:3;5963:9; 5973:15;5979:5; 5980:5;5986:24; 5988:25;5990:19; 5991:1,7,19;5992:4; 5994:19;6000:1; 6012:10;6014:19; 6017:23,23;6022:5; 6023:19;6029:20,24; 6031:7;6032:17; 6034:20;6038:4,23; 6039:12;6040:21,21; 6041:17;6044:5; 6050:14;6054:3,15; 6055:21;6059:25; 6061:3;6064:11; 6069:25;6071:25; 6072:5,18,19; 6073:21,21,21; 6074:8;6081:8; 6084:23;6085:6; 6087:5;6088:24; 6089:12;6094:8; 6095:21,21;6096:18; 6104:21;6105:20; 6108:16;6111:6; 6113:24;6114:19; 6118:17,20;6119:8; 6120:15;6121:10; 6129:4,22;6133:22 Moreover (1) 5947:18 MORNING (28) 5927:1,3,15,18,21, 23,25;5928:2,9,11, 15,23;5929:8,12,18, 21,25;5931:15; 5932:15;5933:12; 5971:21;5997:21,22; 6131:16,19,22; 6132:16;6134:13 most (46) 5933:21;5935:6,6; 5939:23;5956:19; 5965:18,20;5966:4; 5969:4;5970:12; 5972:13;5981:19; 5982:7;5984:3,8; 5991:25;5998:14,15; 6002:1,2;6011:17; 6028:20;6032:2;</p>	<p>6033:2;6034:5; 6035:13;6037:4,21; 6039:23;6041:20; 6051:23;6056:23; 6065:25;6075:6; 6082:5;6089:1,7; 6097:4,19;6108:10; 6114:8;6116:2; 6122:20;6125:4,6; 6129:23 Mostly (7) 6026:20,21; 6046:8;6057:5; 6076:10,11;6084:18 move (18) 5940:1;5946:20; 5958:3;5970:24; 5974:22;5996:25,25; 5997:2;6014:13,14, 15;6017:6;6026:9; 6051:3;6060:11; 6071:8;6076:23; 6091:5 moved (8) 6025:2,4;6030:14, 22;6080:11,15,16; 6133:19 movement (2) 6045:5;6055:2 movements (7) 5982:11;6008:12; 6009:10;6026:12,13; 6034:8;6049:3 mover (3) 5956:8;5958:1,2 moves (4) 6014:3;6016:19; 6026:5;6097:7 moving (21) 5931:17;5945:15; 5946:1;5955:1; 5981:17;6006:21; 6014:18;6026:7,18, 20,21;6048:22,24, 25;6049:7;6069:23; 6070:1,18;6075:3; 6088:23;6114:21 Mozzarella (10) 6011:21;6012:18, 23;6081:22;6098:1; 6124:6,7,9,10,11 MPC (2) 6013:10,17 much (73) 5927:10;5937:16; 5944:21;5948:11; 5953:24;5954:21; 5957:12;5958:7; 5971:12;5976:24; 5983:7;5994:7; 5996:16,17;5999:2; 6001:9;6002:10; 6007:7,8;6009:9;</p>	<p>6019:2;6020:11; 6021:1;6022:1; 6024:2;6026:23; 6035:16,17,23; 6037:25;6038:3,22; 6047:14;6050:22; 6056:15;6064:9; 6065:23;6067:13; 6070:17;6074:5,8; 6076:18,25;6077:4, 13;6081:23; 6086:10;6087:5,18, 24;6088:24; 6091:16;6095:3; 6103:23;6104:21; 6113:2;6114:9,24; 6117:8;6120:21; 6121:18,21;6122:10, 25;6123:21;6126:4; 6127:2,20;6128:10; 6129:4;6130:14; 6131:7;6134:12 multi-county (1) 5981:7 multiple (6) 5941:22;5942:2; 5968:11,21;5983:20; 6021:24 must (2) 5943:17;5956:6 M-W (1) 5938:23 my-dairymancom (1) 5932:13 myself (3) 5972:3;5995:9; 6069:20</p> <hr/> <p style="text-align: center;">N</p> <hr/> <p>name (19) 5927:6,15; 5928:23;5930:11,12; 5936:23,24;5937:23; 5971:22;5975:9; 5989:21;6047:20; 6078:11,12,25; 6100:23;6123:14; 6134:8,11 names (1) 6134:6 narrative (1) 6016:2 nation (1) 6043:14 National (18) 5947:13;6022:14; 6043:5,16;6070:18; 6072:5;6074:20,21; 6076:2;6079:13,15, 17,23;6082:23; 6083:1;6101:15,17, 20</p>
--	---	--	---	---

<p>nationally (1) 6032:14</p> <p>natural (2) 6054:9;6099:17</p> <p>nature (2) 5935:23;5998:12</p> <p>near (4) 5980:25;5981:20; 6044:24;6100:7</p> <p>nearby (2) 5948:20;6034:10</p> <p>nearing (1) 6123:19</p> <p>Nebraska (2) 6079:25;6104:20</p> <p>necessarily (7) 5981:5;6026:9; 6030:15;6046:11; 6054:25;6115:3; 6125:19</p> <p>necessary (3) 5942:8;5970:5; 6069:25</p> <p>need (25) 5930:7;5934:23; 5936:22;5942:5; 5951:23;5965:7; 5990:8;5991:14,15; 6005:14;6024:19; 6027:3;6038:23; 6063:8,24;6066:11; 6075:4;6076:15,18; 6077:20;6084:23; 6085:20;6099:13; 6120:15;6133:24</p> <p>needed (9) 5994:21;6069:23; 6071:9;6076:20,23; 6084:10;6086:13; 6114:3,11</p> <p>needle (1) 6075:4</p> <p>needs (12) 5936:10;5940:6; 5942:8;5996:24; 6018:22;6032:7; 6048:12;6076:24; 6116:11;6122:20; 6133:10,14</p> <p>negative (2) 6047:4,10</p> <p>neglected (1) 6089:16</p> <p>nemesis (1) 6058:23</p> <p>Nestle (2) 6131:25;6132:4</p> <p>Nestle's (2) 6133:5,8</p> <p>net (3) 5954:5,6,7</p> <p>network (5) 5940:2,4;5942:17;</p>	<p>5943:23;5991:14</p> <p>nevertheless (2) 6016:21;6076:15</p> <p>New (23) 5981:15,16,18; 5982:9,23;5991:13; 5998:24;6017:17; 6018:24;6019:5; 6044:24,25;6045:6, 14;6052:1;6065:14; 6069:2;6080:5,6; 6094:1;6095:4; 6097:9;6119:11</p> <p>newly (1) 6030:18</p> <p>News (2) 6069:10;6128:9</p> <p>next (23) 5931:18;5971:2,6; 5992:25;5996:20; 6026:24;6028:3; 6040:6;6045:21; 6047:15;6077:6,18, 21;6090:8,16; 6100:14;6103:24; 6113:3;6114:19; 6116:12;6118:2; 6123:8;6132:20</p> <p>Nicholson (7) 5948:1;5952:18; 5989:11,15,20,24; 5990:11</p> <p>Nicole (2) 5929:18;6133:13</p> <p>night (1) 6129:19</p> <p>nobody (1) 6102:15</p> <p>none (6) 5936:6;5997:6,14; 6077:7;6082:21; 6091:9</p> <p>nonetheless (2) 5986:18;6070:1</p> <p>non-factor (1) 6009:25</p> <p>nonfat (9) 5941:2;5942:6; 5957:18,20,21; 6037:10;6043:23; 6048:23;6069:22</p> <p>non-linear (1) 5991:17</p> <p>nonpool (7) 5999:5;6102:6,7, 23;6103:4;6126:15, 20</p> <p>normally (1) 5971:8</p> <p>Normative (2) 5949:7,14</p> <p>North (8) 5950:17;5980:19,</p>	<p>21;5995:16; 6014:16;6035:20; 6098:14;6131:5</p> <p>Northeast (6) 5998:7,17;6020:1; 6051:22;6080:5; 6127:10</p> <p>Northern (2) 6018:3;6019:5</p> <p>Northwest (21) 5950:3;5956:18; 6016:22;6024:15; 6029:23;6031:9,11; 6057:23;6058:3,6, 18,22;6059:4,24,25; 6067:22;6068:7,12, 14,16;6125:6</p> <p>note (12) 5929:2;5930:3; 5950:5;5951:3; 5952:11;5954:13; 5963:8;6005:15; 6006:5;6018:17; 6050:23;6054:20</p> <p>Noted (9) 5948:20;5949:20; 5950:23;5952:17; 5953:1;5964:16; 6006:6;6015:20; 6023:23</p> <p>notes (3) 5933:10;5934:15; 6061:19</p> <p>Notice (4) 5933:8;5934:17; 6013:10;6093:1</p> <p>noticeable (1) 5934:21</p> <p>noticed (5) 5934:21;5935:3, 11,16;5936:2</p> <p>notified (1) 5934:13</p> <p>notwithstanding (3) 5985:19;5986:18; 6070:14</p> <p>Novakovic (1) 5949:6</p> <p>NOVEMBER (3) 5927:1,2;6028:1</p> <p>NRSC (1) 6099:14</p> <p>Number (28) 5928:12,18,22; 5931:23;5932:1; 5943:12;5959:3; 5972:8;5973:11,22; 5978:20;5988:17,19; 5990:21;5999:3; 6001:17;6003:12; 6006:9;6012:8; 6016:4;6030:20; 6049:2,21;6054:11,</p>	<p>18,19;6105:4;6114:5</p> <p>numbered (2) 5959:14;6034:12</p> <p>numbers (13) 5950:7;5951:11, 12,14;6002:21; 6003:17;6004:13; 6005:3,5,8;6107:3,6; 6123:23</p> <p>numerous (2) 5938:19;5972:5</p> <p>Nutrition (6) 6081:1;6082:2; 6097:9;6099:8,10; 6108:23</p>	<p>6102:12</p> <p>occasions (1) 6029:15</p> <p>occur (7) 5945:8;5989:3; 6024:16;6025:10; 6026:13;6044:5; 6059:20</p> <p>occurred (4) 5966:5;6025:10; 6046:18;6060:18</p> <p>occurring (5) 5954:11;6023:13; 6024:8;6054:12; 6065:20</p> <p>occurs (3) 5961:24;6046:10; 6065:21</p> <p>ocean (2) 6036:4;6044:17</p> <p>Oceania (3) 6069:1,2,13</p> <p>October (1) 6098:20</p> <p>off (15) 5933:16;6017:11; 6025:11;6051:25; 6065:11;6077:22; 6095:5;6096:9; 6097:3,17;6107:11; 6115:1;6131:14; 6133:24;6134:12</p> <p>offer (4) 5938:3,13,14; 5985:22</p> <p>Office (4) 5927:16;5928:10, 25;5931:24</p> <p>official (3) 5931:6;5933:8; 5934:17</p> <p>officially (3) 5934:21;5935:3, 11</p> <p>officially-noticed (1) 5935:19</p> <p>offset (1) 6086:13</p> <p>often (10) 5955:22;5961:12; 5969:4;5973:22,25; 6029:9,11,20; 6055:8,10</p> <p>Ohio (2) 6080:3,4</p> <p>oil (2) 6100:4,5</p> <p>Oklahoma (1) 6080:1</p> <p>O'Lakes (3) 5928:14,20; 6112:14</p> <p>old (3)</p>
O				
			<p>o0o- (2) 6027:23;6134:15</p> <p>object (3) 5977:23;5997:5; 6091:7</p> <p>objection (2) 5977:23;5997:5</p> <p>objections (3) 5997:12,12; 6091:8</p> <p>objective (2) 6028:23;6030:9</p> <p>observations (8) 5961:14,16; 5966:7;5985:6; 5988:8;6036:1; 6054:9,19</p> <p>observe (6) 5956:3;6009:5,14; 6036:23;6061:19; 6068:25</p> <p>observed (10) 5942:14;5947:15; 5952:14;5984:21; 6023:13;6024:7; 6028:22;6030:13; 6060:21;6064:17</p> <p>observer (2) 5930:15;6101:2</p> <p>observing (4) 5930:10;6044:14; 6068:5;6070:5</p> <p>obvious (3) 5944:6;5945:23; 5946:16</p> <p>obviously (4) 5934:1;5963:24; 5967:18;6117:15</p> <p>occasion (1) 5973:9</p> <p>occasionally (5) 5956:18;6012:9; 6019:14;6028:23; 6031:13</p> <p>occasioned (1)</p>	

<p>5938:22;6094:5; 6110:6 oldest (1) 6110:5 olive (2) 6100:4,5 OLIVER (5) 5928:15,15; 6103:25;6104:2,3 once (10) 5945:13;5979:16; 5981:5;6033:22; 6037:21;6057:1; 6067:6;6103:2,3; 6131:3 one (117) 5931:1,23; 5932:18;5933:6; 5935:20;5937:19; 5941:23;5946:2; 5951:12,15,23; 5957:6;5958:8; 5961:15;5963:18; 5967:13;5973:4; 5974:14,16;5977:23, 25;5978:24;5980:9, 24;5982:16;5983:1, 2;5984:24;5991:22; 5996:5,13;5997:5, 12;6005:10,11; 6006:13;6007:5; 6008:21,23;6011:6, 22,23;6013:25; 6014:12;6018:12; 6019:6;6021:5; 6022:14;6023:2; 6024:19;6025:22; 6028:17;6029:24; 6038:4;6039:4; 6043:5;6045:11; 6050:12,19;6051:5, 9;6052:12,12; 6055:8,18,21,23; 6056:2,16;6057:16, 16;6059:14;6062:1; 6063:5,14;6065:3; 6067:18;6068:4; 6070:11;6072:17,19; 6073:10,19;6074:18, 19,25,25,25; 6075:25;6076:1,12; 6077:17;6082:25; 6084:20;6085:13; 6087:2;6089:1; 6091:7;6094:12,16; 6095:21;6104:6,18; 6110:5;6113:17; 6114:17;6115:5; 6117:25;6122:18; 6123:2,4;6124:22, 22;6127:22,25; 6129:22;6134:4 ones (9)</p>	<p>5934:6;5935:1; 5947:5;5966:4; 5999:12;6030:24; 6056:5;6090:25; 6106:11 online (1) 6062:3 only (28) 5941:24;5942:8; 5953:2;5967:13,15; 5970:6;5999:21; 6008:11,21;6012:8; 6014:1,2;6018:11; 6035:14;6044:10; 6047:2;6055:23; 6082:10;6084:22; 6086:11;6089:1; 6091:1;6099:12; 6101:6;6107:8; 6111:19;6120:2,24 onsite (7) 6000:3,16,21; 6001:15,25;6002:5, 15 onto (2) 5946:20;6016:19 operate (9) 5982:14;6028:24; 6029:24;6030:16; 6050:8;6056:18; 6070:23;6072:10; 6082:13 operates (1) 6030:8 operating (4) 6007:7;6041:25; 6102:6,7 operation (6) 5959:20;5960:1,3, 7;6056:10;6085:6 operations (7) 6052:18;6079:4, 21;6080:7;6096:25; 6100:9;6105:21 operator (1) 6097:14 operators (3) 5987:20;6084:4,8 opinion (3) 5969:13;6084:13; 6096:4 opportunities (5) 5948:15;5972:5; 5987:17;6009:7; 6073:21 opportunity (10) 5933:25;5986:14; 6001:19;6031:2; 6058:8;6072:9; 6073:23;6077:11; 6089:14;6119:24 opposed (13) 5975:17;5976:6;</p>	<p>5984:2;6002:21,23; 6035:2;6042:18; 6056:12;6071:17; 6081:12;6088:10; 6106:20;6109:15 opposition (3) 5938:12;6048:3; 6113:18 optimal (2) 5949:23;5953:6 optimistic (1) 6133:25 optimization (1) 5939:20 option (4) 5999:21;6102:22, 24,25 options (2) 5948:13;5961:2 Orange (10) 5944:7,8;5945:20, 22;5946:6,14; 5981:8;6049:11; 6066:11,13 Order (68) 5928:4,8;5929:3; 5932:8;5938:5,20; 5939:3;5952:19; 5955:15;5958:9; 5959:13,16;5967:6; 5969:15,19;5974:10; 5976:12;6016:1; 6022:13,22;6023:6, 14;6026:16;6052:13, 14;6058:3,6;6068:4, 7;6070:23;6071:3; 6073:15;6076:4; 6077:3;6079:15; 6080:17,18,19; 6082:20;6084:10,20, 25;6085:2,3,4; 6086:14;6087:9,13; 6088:21;6089:10; 6092:11;6093:9,10; 6094:17;6102:19; 6109:10;6111:6; 6112:4;6114:11; 6120:20;6121:2,6, 15;6122:4;6132:1,4, 4;6133:23 orderly (1) 5957:5 Orders (17) 5955:10;5965:22; 5988:11;5999:17; 6022:2;6026:17; 6043:9;6052:15; 6059:18;6061:10,12, 13;6087:13;6111:12, 15;6112:1;6121:17 Oregon (2) 6018:3;6036:4 Organization (5)</p>	<p>6079:13,17,21,23; 6101:15 oriented (1) 6114:24 original (6) 5935:2;5949:5,19; 5950:6;5990:20; 6062:14 originally (1) 6006:20 originating (1) 6036:19 osmosis (3) 5962:23;5967:14; 6116:5 others (11) 5930:21;5972:1; 6059:25;6088:12; 6106:20;6108:4,5, 14;6113:22;6115:9; 6128:8 otherwise (4) 5938:23;5967:22; 6037:4;6057:8 ourselves (1) 5992:16 out (61) 5932:3;5933:13, 13;5967:3;5980:11, 13,14;5981:3; 5999:11;6001:5; 6004:17,18;6008:18; 6010:4;6013:20; 6016:9,14;6019:13, 16;6020:5;6026:1; 6038:2;6039:11; 6040:15,18,23; 6041:6;6044:21; 6045:2;6048:1; 6072:5,7;6075:22; 6077:5;6079:3,25; 6082:15;6083:6; 6085:23;6094:7; 6096:13;6099:11; 6101:5,6;6111:15, 20;6114:12;6116:5; 6119:5,22;6123:2; 6125:11;6126:5; 6127:11;6128:6; 6129:2,8;6130:5,9, 10;6134:3 outbursts (1) 6021:4 outcomes (5) 5943:5;5947:10, 20,21;5985:1 outlet (1) 6095:22 outliers (1) 5961:20 output (3) 5944:3;6012:22; 6068:5</p>	<p>outputs (1) 5946:4 Outreach (3) 5939:11;5973:8; 5977:14 outside (12) 5950:14;5954:15; 5973:16;6019:18; 6036:6,13,19; 6081:24;6084:21; 6087:3;6095:10; 6109:15 over (49) 5938:9;5949:2; 5952:16;5953:11,21; 5954:2;5969:12,20; 5974:10;5978:21; 5983:25;5984:4; 5987:10;5988:22; 5991:11;5992:25; 6001:21;6005:24; 6007:15,17;6013:19; 6022:8;6023:7,19; 6025:2,4;6045:6; 6048:5,21;6056:8; 6060:17,22;6063:16; 6070:19;6071:3; 6072:12;6074:3; 6086:16;6094:6; 6105:16;6106:1,2; 6111:12,19;6113:10; 6119:11;6121:7,8; 6133:22 overall (2) 6084:25;6085:4 overhead (1) 6087:24 overkill (1) 6013:11 overlaid (1) 5980:16 overlooked (1) 6066:10 overs (1) 6004:6 overseas (1) 6060:16 oversees (1) 6074:15 overwhelm (1) 5946:25 own (30) 5932:3;5954:17; 5959:19;5960:12; 5987:14;6042:1; 6050:13;6056:24; 6079:12;6081:24; 6094:14;6096:6; 6101:6,8,12;6102:2; 6103:10;6104:21; 6105:2;6106:12,16, 20;6108:3,11; 6109:5;6113:9,9;</p>
--	--	--	--	--

<p>6114:3,23;6115:19 owned (3) 6054:24;6055:3; 6103:22 owner (1) 5948:11 owners (1) 5956:22 ownership (9) 5969:22;6010:1,4, 5;6023:9;6024:8,17, 24;6025:3 owns (1) 6094:13</p>	<p>5993:6;6021:17 paid (5) 5956:6,12;5958:8; 6094:18;6095:9 paint (1) 6073:25 painted (1) 6076:6 Panhandle (1) 5982:8 pants (1) 6023:9 paper (5) 5935:20;5952:21; 6062:13,14;6090:5 papers (2) 5976:6,6 paragraph (27) 5964:16;5971:2,7; 6023:5;6045:19,21; 6046:9;6053:5; 6054:2,20;6089:23; 6090:1,2,8,16; 6092:5;6110:9; 6111:3;6112:6; 6113:3,17;6114:20; 6115:14,18;6125:15; 6127:1;6128:2</p>	<p>part (30) 5932:12;5933:3; 5951:5;5990:13; 5993:8;6006:7; 6049:15;6054:9; 6055:14;6063:16; 6064:4;6073:10; 6076:13,22;6082:2; 6093:3;6102:19; 6105:23;6108:19; 6119:10,10;6120:4, 6;6131:20,21,21; 6132:6,10,11,14 partial (2) 6005:19,20 partially (5) 5968:4;6024:14; 6040:12;6041:11; 6065:10 participants (4) 5927:13;5958:20; 6007:21;6017:9 participate (1) 6102:3 participated (2) 5998:2,6 participating (2) 5930:10;6048:2 particular (30) 5938:12;5946:24; 5947:6;5961:18; 5965:23;5974:17; 5979:13;5980:6,15; 5985:10;5987:20; 5990:23;5991:4; 6004:9;6013:13; 6019:15,22;6021:10, 21;6032:7;6038:2; 6058:15;6065:2; 6068:7;6073:4,25; 6088:23;6106:11; 6111:5;6123:24 particularly (3) 5974:2;5992:3,5 partition (1) 5953:11 partly (1) 5988:5 parts (7) 5938:25;6005:21; 6037:4;6065:13; 6066:25;6087:16; 6097:15 pass (6) 6120:3,13;6122:5; 6123:5;6126:6,7 past (8) 5973:14;5975:22; 6019:14;6026:15; 6100:21;6116:25; 6126:19;6132:4 pasta (3) 6081:22;6098:1;</p>	<p>6124:4 pasteurized (2) 5967:21;6116:8 pasteurizing (2) 6053:12,24 pasturizing (1) 5962:22 patience (1) 6077:10 pay (35) 5948:12;5950:19; 5960:24;5966:15,18; 5988:2;6037:25; 6038:1;6056:11; 6064:10;6072:21,23; 6082:20;6085:8,10; 6086:2,12,22; 6087:21;6092:3; 6094:21;6095:6; 6113:9;6119:6; 6120:19;6121:1,5, 12,15;6124:13,15, 16;6125:25;6126:1, 20 paying (5) 5965:25;6115:3; 6121:13;6125:21,25 payment (2) 6074:19;6087:11 PDF (1) 5979:17 peer (1) 5948:2 penalty (2) 5936:19;6078:8 Pennsylvania (1) 6080:5 people (30) 5933:1,2;5970:23; 5972:13;5976:21; 5978:12,13;5979:3; 6007:6;6009:7; 6014:21,21;6021:15; 6056:17;6063:13; 6069:20;6096:11; 6097:12;6099:15; 6107:19;6111:9; 6112:23;6114:18; 6121:11;6122:21,22; 6127:6,7;6130:7; 6133:22 people's (1) 6009:11 Pepper (1) 6129:10 per (67) 5941:9,11,16; 5950:10;5951:16; 5952:13;5954:1,3; 5957:22;5959:5,7,9, 10,21;5960:14,16, 19;5962:12,14,15, 16;5963:5,20,22;</p>	<p>5964:15,23;5965:1, 6,10,12,14,14; 5969:2,5;5988:9,10, 17,20;5989:17; 5993:20;6000:1,15; 6016:3;6032:22; 6033:14,19;6034:15; 6040:20,22;6046:22; 6054:3;6056:2,6,11; 6083:4,4,9,10,17, 19;6086:16; 6087:18;6092:6,15; 6095:13;6120:22 percent (65) 5947:19;5953:19, 21,22,23;5960:15, 18,22;5961:14,15, 18,23;5962:21,22, 23;5963:2,7,9,9,21; 5968:15,20,23; 5969:1,3;5973:4; 5982:8,9;6001:13; 6002:4,7,14,15,16; 6003:20;6004:14,16; 6005:1;6012:14; 6023:25,25;6036:3, 5,8,15,18,21; 6038:10,14;6043:25; 6053:6;6054:2; 6056:3;6062:4,9; 6088:19;6098:3; 6107:1;6113:5,13, 16,23;6114:1; 6117:5,9 percentage (10) 5968:5,11,21; 5973:1;6052:2,3,11; 6106:19;6109:14; 6117:8 percentages (2) 5968:9;6003:10 perceptible (1) 6038:16 percolating (1) 5975:24 perfect (1) 6075:6 perfectly (4) 5984:25;5985:15; 6008:4,9 perhaps (9) 5935:15,20; 6013:11;6014:20; 6025:25;6037:6; 6053:19;6054:14; 6076:14 period (18) 5938:10;5953:21; 5954:3;5972:1; 5974:10;5979:20; 5987:25;5988:22; 5993:18,19;6020:20; 6046:18;6047:6;</p>
<p>P</p>	<p>parallel (1) 6076:3 parallels (1) 6076:7 parameters (1) 6019:11 pardon (1) 6061:18 paribus (1) 5950:21 Paris (73) 6077:19;6078:2,2, 6,10,12,12,20,25; 6079:7,16;6083:8, 14,21,23;6084:7; 6085:3;6089:16,23; 6090:1,6,9,11,19,22; 6091:3,6,12,15,19, 22;6098:11,13,20, 23;6099:1,9,19,21, 24;6100:1,4,6,11,14, 16;6101:2;6103:24; 6104:4;6115:11,13, 15,17,22,25;6116:2, 10,13,16;6118:2; 6122:15;6123:8,12; 6127:15,17,21; 6130:20,22,23,25; 6131:3,7,9 Paris' (2) 6078:3;6089:21 P-A-R-I-S (1) 6078:12 parmesan (2) 6011:22;6012:23</p>	<p>part (30) 5932:12;5933:3; 5951:5;5990:13; 5993:8;6006:7; 6049:15;6054:9; 6055:14;6063:16; 6064:4;6073:10; 6076:13,22;6082:2; 6093:3;6102:19; 6105:23;6108:19; 6119:10,10;6120:4, 6;6131:20,21,21; 6132:6,10,11,14 partial (2) 6005:19,20 partially (5) 5968:4;6024:14; 6040:12;6041:11; 6065:10 participants (4) 5927:13;5958:20; 6007:21;6017:9 participate (1) 6102:3 participated (2) 5998:2,6 participating (2) 5930:10;6048:2 particular (30) 5938:12;5946:24; 5947:6;5961:18; 5965:23;5974:17; 5979:13;5980:6,15; 5985:10;5987:20; 5990:23;5991:4; 6004:9;6013:13; 6019:15,22;6021:10, 21;6032:7;6038:2; 6058:15;6065:2; 6068:7;6073:4,25; 6088:23;6106:11; 6111:5;6123:24 particularly (3) 5974:2;5992:3,5 partition (1) 5953:11 partly (1) 5988:5 parts (7) 5938:25;6005:21; 6037:4;6065:13; 6066:25;6087:16; 6097:15 pass (6) 6120:3,13;6122:5; 6123:5;6126:6,7 past (8) 5973:14;5975:22; 6019:14;6026:15; 6100:21;6116:25; 6126:19;6132:4 pasta (3) 6081:22;6098:1;</p>	<p>pay (35) 5948:12;5950:19; 5960:24;5966:15,18; 5988:2;6037:25; 6038:1;6056:11; 6064:10;6072:21,23; 6082:20;6085:8,10; 6086:2,12,22; 6087:21;6092:3; 6094:21;6095:6; 6113:9;6119:6; 6120:19;6121:1,5, 12,15;6124:13,15, 16;6125:25;6126:1, 20 paying (5) 5965:25;6115:3; 6121:13;6125:21,25 payment (2) 6074:19;6087:11 PDF (1) 5979:17 peer (1) 5948:2 penalty (2) 5936:19;6078:8 Pennsylvania (1) 6080:5 people (30) 5933:1,2;5970:23; 5972:13;5976:21; 5978:12,13;5979:3; 6007:6;6009:7; 6014:21,21;6021:15; 6056:17;6063:13; 6069:20;6096:11; 6097:12;6099:15; 6107:19;6111:9; 6112:23;6114:18; 6121:11;6122:21,22; 6127:6,7;6130:7; 6133:22 people's (1) 6009:11 Pepper (1) 6129:10 per (67) 5941:9,11,16; 5950:10;5951:16; 5952:13;5954:1,3; 5957:22;5959:5,7,9, 10,21;5960:14,16, 19;5962:12,14,15, 16;5963:5,20,22;</p>	<p>percent (65) 5947:19;5953:19, 21,22,23;5960:15, 18,22;5961:14,15, 18,23;5962:21,22, 23;5963:2,7,9,9,21; 5968:15,20,23; 5969:1,3;5973:4; 5982:8,9;6001:13; 6002:4,7,14,15,16; 6003:20;6004:14,16; 6005:1;6012:14; 6023:25,25;6036:3, 5,8,15,18,21; 6038:10,14;6043:25; 6053:6;6054:2; 6056:3;6062:4,9; 6088:19;6098:3; 6107:1;6113:5,13, 16,23;6114:1; 6117:5,9 percentage (10) 5968:5,11,21; 5973:1;6052:2,3,11; 6106:19;6109:14; 6117:8 percentages (2) 5968:9;6003:10 perceptible (1) 6038:16 percolating (1) 5975:24 perfect (1) 6075:6 perfectly (4) 5984:25;5985:15; 6008:4,9 perhaps (9) 5935:15,20; 6013:11;6014:20; 6025:25;6037:6; 6053:19;6054:14; 6076:14 period (18) 5938:10;5953:21; 5954:3;5972:1; 5974:10;5979:20; 5987:25;5988:22; 5993:18,19;6020:20; 6046:18;6047:6;</p>

6087:21;6092:16; 6110:14,22;6121:8 periodic (1) 5975:22 periodically (2) 6012:9;6058:20 periods (3) 5955:12;5978:25; 6059:25 perjury (2) 5936:20;6078:9 permanent (1) 6085:6 permeate (3) 6097:2;6107:11, 13 permission (2) 6089:22;6095:12 person (4) 5930:9;5932:24; 6014:12;6028:3 personal (2) 6019:8;6021:12 personnel (1) 5938:2 persons (1) 6017:9 pertinent (1) 6079:5 PhD (8) 5937:2,4,6,23; 5972:12,19;5974:14; 5976:8 Phillip (1) 5949:6 phone (1) 5986:4 phrase (2) 5949:13;5968:12 physical (1) 5943:22 Piccadilly (1) 5931:18 pick (5) 5972:15;5980:5; 6019:8;6029:9; 6124:16 picked (4) 6055:18,20; 6130:4,6 picking (4) 6029:12;6049:5; 6071:15;6076:5 piece (3) 5974:16;6090:5; 6132:19 pieces (3) 5971:25;5986:15, 22 pipe (1) 6040:17 pipes (1) 6041:16	place (17) 5933:20;5979:8; 6016:17;6055:6; 6068:1,1;6072:20; 6080:14;6082:22; 6105:7,21,24; 6106:5;6124:22,22, 23;6128:15 places (2) 5982:11;6069:6 place-to (1) 5970:12 plan (2) 5931:18;6088:17 planned (2) 6088:14,15 planning (1) 6084:10 plans (1) 6081:20 plant (153) 5939:24;5941:18, 25;5942:3,4,6,7,18, 25;5943:1,1; 5944:20,20;5945:15, 25;5946:13;5948:9, 11,14;5959:2,12,14; 5960:12;5961:5,10; 5962:20;5963:13; 5966:21;5967:16; 5968:4,8,16; 5969:20;5981:6,18, 20;5982:14,16,23, 25;5988:14; 5991:13;5992:10,12; 5999:10,13;6000:8; 6001:4,22;6003:17, 18;6005:3,5,7; 6008:25;6009:18,22; 6017:16,17;6019:6; 6023:8;6025:2; 6028:24;6030:8,17, 17,19;6031:3; 6038:22;6040:16; 6041:22,23;6042:9; 6046:11;6049:18; 6050:2,8,10,12,14; 6051:24;6055:8; 6056:9;6057:3,4; 6058:8;6064:25; 6065:20,22,23,24; 6066:8;6080:25; 6081:1,2,18,18,19, 24;6082:2,13,13,19, 22;6084:4,7; 6088:19;6089:1; 6095:6;6096:6; 6097:6,7,9,14,15; 6098:15;6099:7; 6102:6,7,23;6103:4, 5,21;6104:18,19,22; 6105:3;6108:4,8,9; 6111:19;6112:12,13,	14;6113:4,8; 6115:19;6116:8; 6117:3;6118:12,18, 20;6123:20,21; 6124:13,14,16; 6126:15,15,20; 6128:25;6129:4,5 planted (1) 6109:23 planting (1) 6085:6 Plants (205) 5937:22;5938:17; 5939:21;5940:2; 5941:20,21,24; 5943:10;5944:5,9, 13,16,19;5950:21; 5951:23;5952:25; 5958:11,13,16,19,25, 25;5959:3,16,18,18, 20,25;5960:11,11, 13,15,18,21,23; 5961:2,4,6,9,14,18, 20;5962:18,19; 5963:1,1,12,15,17, 21,25;5964:1,2,3; 5965:11;5966:12,15, 20;5967:13,19,20; 5969:22;5970:4,6,8, 11;5976:9;5980:20; 5982:16;5983:12; 5985:25;5986:1,3,5, 14,17;5988:12; 5997:25;5998:3,7, 13,15;5999:2,5,6,16, 25;6000:1,9,12,14, 14,16,21;6001:1,8, 11,14,15,20,21,22, 24;6002:21; 6003:12;6004:6,21; 6008:23;6009:2; 6010:1;6016:11,24; 6024:8,24;6029:6,7, 10;6030:1,2,21; 6033:24;6035:18; 6041:2,25;6042:4; 6048:23,24;6049:7, 10,20,21,23; 6051:16,17,19,20, 25;6052:1,6,9,11,13, 15,16,17,24;6053:1, 6,11;6054:3,5,11,13, 15,22,24;6055:2,7, 21,22;6056:18,22, 23;6057:7,7;6058:7, 9;6059:22;6061:24; 6062:18;6063:8; 6065:7,10;6066:1,2, 6,19,23;6067:14,15; 6072:10;6082:1,19; 6084:14,15;6087:9, 15,24;6088:1,4,11, 11,14,15;6089:11;	6108:12;6109:8; 6112:4,7;6113:19; 6115:21,24;6124:24; 6125:21;6126:5; 6129:14 plant's (1) 6116:23 plant-to-plant (1) 6055:2 playing (1) 6072:17 please (12) 5936:7,18; 5971:13;6027:8,21; 6036:11;6078:7,11; 6083:7;6084:6; 6090:10;6115:16 plenty (1) 5948:19 plight (1) 6084:2 plot (2) 5961:9,11 plots (1) 5961:12 plotting (2) 6064:3,5 plug (1) 6111:15 plus (8) 5947:19;5964:4, 22;5966:1;6056:6; 6107:10;6116:11; 6128:8 pocket (1) 6017:5 pockets (1) 5955:6 podium (1) 5930:5 point (49) 5934:6;5938:22; 5945:1;5951:12; 5953:1;5955:21; 5956:14;5964:5; 5974:21,22;5978:8, 14;5982:24; 5984:19;5987:1,5; 5989:17,22;5990:4, 22;5991:5,22; 5992:20;6006:13,23; 6007:5,7,12; 6010:17;6013:8; 6016:17;6017:12,22; 6024:18;6038:5,15; 6044:10;6052:5; 6059:12;6063:6,14, 22;6073:6;6095:3; 6102:8;6107:15; 6108:7;6132:8; 6133:24 points (14) 5940:19;5982:22;	5983:20,20,22,23; 5984:2;5991:12; 6016:6;6017:12,20; 6049:8;6067:9; 6075:5 policies (2) 5973:25;5976:22 Policy (32) 5929:13;5937:24; 5938:7;5939:8,12; 5947:24;5948:24; 5973:10;5974:24; 5975:1,16,17,24; 5976:5,13,16,19,19, 20;5977:3,5,13,15, 16,18,18,25;5978:3; 5996:4;6022:8,17; 6070:21 Ponderosa (2) 5929:20,24 pool (16) 5956:10;5959:14; 5999:5;6058:7,8; 6061:14;6102:4,5, 19,21;6103:5,15; 6111:20,20,25; 6112:2 pooled (12) 5999:17,20,20; 6026:20,21;6102:15; 6103:8,11,14,14; 6111:14;6113:10 pooling (5) 5955:17;6026:17; 6059:15;6102:18; 6111:13 pools (1) 5959:15 popped (1) 6102:14 population (12) 5941:16;5953:22; 5980:18;6018:6,7; 6032:19;6033:14,20; 6034:4;6051:17; 6086:7,11 port (8) 5942:10;6044:21; 6045:5,6,12,14,15; 6065:7 portion (14) 5960:16;5982:9; 5999:24;6000:20; 6025:2;6034:23; 6041:24;6044:20; 6045:20;6051:3; 6053:7,17;6056:25; 6065:8 portions (1) 6057:10 ports (5) 6044:6,7,11; 6045:2,11
---	--	--	--	--

<p>position (10) 5936:17;5977:6; 6071:15;6073:9; 6075:25;6078:7; 6084:17;6100:17,20; 6113:25</p> <p>positive (1) 6093:9</p> <p>possible (9) 5939:24;5940:10; 5942:19;6014:12; 6033:1;6034:6; 6049:24;6058:5; 6094:17</p> <p>possibly (5) 6030:11;6083:24; 6085:13;6093:4; 6125:17</p> <p>posted (2) 5932:10,11</p> <p>potential (2) 5939:10;6072:8</p> <p>potentially (3) 6037:2;6038:11; 6107:24</p> <p>pound (34) 5957:22;5963:3,5, 22;5964:15,23; 5965:1,6,12,14,15; 5969:5;5988:9,10, 20;5992:4;6040:20, 22;6046:22; 6054:11;6056:12; 6083:4,4,10,10,17, 19;6086:17; 6092:15;6110:11; 6117:13,19;6120:22; 6121:7</p> <p>pounds (23) 5954:4,5,7;5959:5, 7,9,10,21;5960:14, 16,19;5963:5,18,23; 6000:1,15;6053:7; 6054:3,13,19; 6064:10;6081:20; 6118:16</p> <p>powder (9) 5929:14;5957:20; 5976:9;6021:21; 6029:25;6030:18; 6038:12;6043:23; 6084:18</p> <p>power (4) 5989:17,21; 5990:4;6010:17</p> <p>practical (5) 5939:20;5956:2,5; 6031:1;6070:25</p> <p>practically (1) 5977:19</p> <p>practice (1) 6042:14</p> <p>Practices (5)</p>	<p>5937:22;5938:17; 5958:4;6029:23; 6067:19</p> <p>Pratt (2) 5949:5;5962:8</p> <p>pre-1985 (1) 6084:17</p> <p>preceding (1) 6046:23</p> <p>precise (5) 6001:13;6002:3; 6004:25;6008:21; 6024:5</p> <p>precisely (7) 5935:5;5988:17; 6000:11;6011:11; 6016:6;6025:23; 6043:8</p> <p>precursor (2) 5974:16;5978:18</p> <p>predict (3) 5984:25;5985:14; 6050:1</p> <p>predicted (1) 5953:6</p> <p>predicts (1) 5953:3</p> <p>predominantly (1) 6014:10</p> <p>prefer (3) 5934:22;6027:7,9</p> <p>preliminary (4) 5930:22;5931:22; 5932:14;5936:6</p> <p>premium (12) 5968:19,24; 6068:16;6076:19,22, 24,25;6095:6,7,9; 6113:10;6128:7</p> <p>premiums (17) 5956:12;5957:12; 6009:8;6071:3,20, 23;6072:1,22; 6085:7,11;6086:2; 6094:18,22;6095:1, 5;6121:5;6126:2</p> <p>prepared (7) 5970:20;6001:7; 6006:5;6011:7; 6042:16;6066:17; 6123:24</p> <p>Pre-Reform (1) 6059:9</p> <p>present (5) 5936:20;5957:5; 6065:15,15;6078:9</p> <p>presentation (2) 5989:17;5990:4</p> <p>presented (1) 5979:12</p> <p>presenting (2) 5990:12;6070:13</p> <p>preserved (1)</p>	<p>5932:4</p> <p>pretending (1) 6002:3</p> <p>pretty (11) 5985:10;6002:10; 6009:9;6016:13; 6018:16;6032:11; 6050:16;6054:10; 6080:9;6095:20,23</p> <p>prevailing (1) 6073:3</p> <p>previous (3) 5977:8;5990:20; 6054:6</p> <p>price (179) 5938:23,24; 5939:9,15;5949:21, 25;5950:9,25; 5951:1,25;5952:22; 5955:17,24;5956:2, 2,4,7,8,11,14,22,25, 25;5957:3,6,10,10, 13,14,16,19,19,20, 22,23,25;5958:1,1,5, 8,11;5965:22,23; 5967:6,6;5968:11, 14,19,22,25;5969:5, 14,16,17,19,25; 5970:1,3;5974:19, 20;5980:1;5988:11; 5993:1,20;5994:14, 22;5995:13; 6016:18;6017:25; 6018:2,25;6020:12, 13;6022:9,11,14,21; 6023:6,14;6024:20; 6026:12;6037:20; 6038:16;6039:1,2; 6043:6,13,18; 6047:4,7,8,11; 6056:6;6058:24,25; 6059:17;6060:3; 6062:15,15,17,20; 6063:2,4,9,13,18,22, 23,24,25;6068:2,4,6, 10;6069:21,25; 6070:25;6071:1,4, 10,11,13,18; 6072:17;6073:22; 6074:18,25;6082:21; 6085:18,20;6086:5, 14;6087:5,19,22; 6088:25;6089:2,4,7; 6090:13;6092:11,12, 19;6093:4,4,15,17, 23;6094:2,8,10,12; 6096:15,15,19; 6103:18;6113:10; 6114:25;6115:2; 6119:8;6120:3,14, 19,23;6121:1,10,12, 13,15,16,22; 6122:24,24,25;</p>	<p>6124:15;6125:22,23; 6126:1;6127:11</p> <p>priced (3) 6088:21;6093:9; 6108:1</p> <p>Prices (72) 5949:7,12,14; 5950:23;5951:2; 5952:7,19;5955:13, 14;5956:6;5957:8, 17,24;5958:6,7; 5966:9,10;5970:18; 5993:13,14;6008:8; 6017:11;6021:18,20, 25;6022:3,6; 6023:21;6025:25; 6030:11;6037:19; 6043:16;6057:20; 6060:14;6068:17,22; 6069:3,15;6070:1,4; 6071:22;6072:23; 6073:3;6074:9,9; 6076:25;6084:24,25; 6085:3,14,23; 6086:9,13,16; 6088:5;6092:25; 6095:5;6099:22; 6112:8;6119:6; 6120:11,18,21,25; 6121:4,5,6;6122:7, 23;6127:3;6128:4,13</p> <p>pricing (25) 5955:17;5956:13; 5966:15,18;6023:21; 6031:14;6058:3,6, 10;6059:16; 6070:23;6087:10; 6088:6,23;6089:2,7; 6092:10;6093:6; 6094:1;6095:4; 6112:9;6114:21,23; 6115:8;6120:5</p> <p>Primal (11) 5943:8,21,21; 5944:3,13,17; 5945:8;5951:22; 6048:6,11;6065:4</p> <p>Primarily (2) 5938:14;6052:15</p> <p>primary (1) 6008:16</p> <p>principal (1) 5947:22</p> <p>principles (1) 6088:22</p> <p>print (2) 5946:24;6061:19</p> <p>printed (2) 6089:24;6090:4</p> <p>printing (1) 6048:16</p> <p>prior (7) 5932:9;5962:24;</p>	<p>6039:6;6079:12; 6102:22;6103:5; 6111:12</p> <p>priority (1) 6018:18</p> <p>private (1) 6112:15</p> <p>Pro (3) 6097:19,22; 6107:10</p> <p>probably (30) 5935:22;5946:25; 5967:21;5970:12; 5973:13;5984:8; 5985:7;6004:12; 6005:13;6017:1; 6019:23;6020:23; 6022:5;6059:8; 6063:11;6066:7; 6069:23;6085:22; 6093:24;6095:4; 6100:12;6104:17; 6111:9,11,18; 6113:14;6115:2; 6123:23;6129:4,18</p> <p>problem (16) 5939:21;5956:5; 5957:9;6024:22; 6056:17;6058:17,21, 25;6059:24;6060:1, 2,3,13;6061:16; 6121:24;6122:2</p> <p>problems (13) 5969:12;5976:14; 6023:22;6058:10; 6059:13,19,23; 6060:4,18;6061:9; 6075:6,7;6076:21</p> <p>problem-solving (1) 5977:19</p> <p>procedurally (1) 5933:16</p> <p>proceed (1) 6078:15</p> <p>proceeding (2) 6048:2;6123:18</p> <p>proceeds (1) 6059:15</p> <p>process (47) 5934:1;5941:24; 5942:1;5944:21; 5945:17;5953:6; 5958:16;5959:19; 5960:3,6,12,16; 5966:22;5967:13,15; 5984:10;5985:23; 5986:12;6000:3,5; 6001:10;6002:15; 6003:7,22;6004:7; 6009:23;6022:22,25; 6037:3;6038:24; 6040:2;6041:15; 6045:19;6050:11;</p>
--	---	---	---	---

6053:7;6056:24; 6057:9;6064:14; 6065:23;6081:20; 6082:18;6088:1; 6096:24;6097:8; 6106:13;6124:9,12 processed (41) 5939:22;5944:12; 5963:19,22;5967:22; 5968:4;5980:20; 5981:7,18;5982:21; 5984:7;5985:2; 6000:6,9,16,21; 6001:4,9,14;6002:4, 23;6004:21;6009:16, 24;6029:7,8; 6030:14;6036:22; 6041:2;6046:7; 6050:11;6052:7,9; 6055:21;6057:5; 6065:25;6067:7,14; 6082:1;6092:15; 6107:8 processes (5) 5962:24;6065:22; 6066:8;6081:23; 6096:23 processing (91) 5938:17;5941:22; 5943:10;5944:21; 5945:11,16,20; 5946:10;5949:23; 5953:3;5959:1,4,20; 5960:13,15,18,19, 21;5961:4,10,24; 5962:20,21;5963:1, 7,12,18;5964:1,14, 24;5965:3,10,12; 5966:1,20,24; 5967:9;5980:16; 5981:5,6;5983:13; 5988:13,14,15; 5991:13;6000:7; 6001:25;6003:19; 6005:19,20;6006:8; 6019:3;6031:24; 6040:9,10;6042:1; 6046:12;6049:21; 6052:23,25;6053:2, 4,6,9,13,19,20,21,23; 6054:1,3,4,12; 6055:13,18,22; 6064:9,18,22; 6065:19,21;6081:1; 6084:15;6085:15; 6088:16;6089:12; 6105:13;6106:4,17; 6108:3;6123:20 processor (4) 5950:20;5965:8; 6084:11;6085:21 processors (4) 5964:2;5969:11;	6069:16;6084:9 produce (20) 5960:5;5967:4; 5970:9;6007:8; 6017:14;6020:21; 6021:2;6035:16,18; 6040:11;6043:14; 6049:13;6050:2; 6073:2,5;6074:2,5; 6096:22;6118:11; 6123:21 produced (17) 5941:25;5947:11; 5955:25;5958:12; 5959:19;5960:12; 5990:25;6001:14; 6010:15,24;6029:5; 6032:2;6037:9; 6050:17;6066:1; 6067:23;6106:25 Producer (13) 5929:19,23; 5934:14;5956:11; 5958:5;6075:4; 6084:9,11;6085:17, 21;6089:13;6122:5; 6134:4 producer-distributor (1) 6132:17 producer-handler (1) 6133:16 Producers (30) 5930:1;5956:14; 5958:8;5969:10,14; 6021:1;6031:16; 6059:16;6060:12; 6063:10;6070:11; 6073:1,5,25;6075:6, 7,12;6076:12; 6084:3,7,16;6086:3, 5,23;6090:3,11; 6091:24;6095:9; 6118:8;6128:3 produces (2) 6096:21;6107:9 producing (9) 5957:4;5960:6; 5970:9;5985:13; 6006:8;6033:24; 6050:3;6061:2; 6108:11 product (146) 5939:25;5940:22, 25;5941:1,7,14; 5943:14,22;5944:21; 5945:8;5946:13,20; 5947:4;5948:16; 5951:22;5956:25; 5957:19,23,24; 5958:15;5960:3,5, 17,20,21;5961:4; 5962:21;5964:2,24; 5965:8;5966:22,25;	5967:19,21;5969:19, 25;5970:13; 5974:19;5979:4,19; 5980:20;5981:8,9; 5983:12;5990:21; 5991:6;5992:13,14; 6000:10;6001:4; 6004:8,12;6007:8; 6008:12;6009:13,16; 6013:1,4;6014:13, 15;6016:16; 6021:25;6022:6,11; 6023:6,14;6030:5, 16,22,25;6031:25; 6032:11,13;6035:5, 5,7,17;6037:9; 6038:6;6039:7; 6040:11,16;6041:11; 6042:1,5,24;6044:9, 10;6045:7,18,20,22, 22,23,25;6046:5,9, 12;6047:4,11; 6048:22;6049:6; 6050:3,5;6052:11; 6053:8,18;6054:4, 21;6055:8;6057:4; 6060:8,11,15; 6061:3,3;6064:11, 23;6065:22,25; 6066:4;6067:7,13, 17;6068:23;6069:7, 15;6070:3,18; 6072:3,6;6084:24; 6085:3,23;6089:2,7; 6097:17;6107:8; 6117:16;6119:13,14; 6120:19,21;6121:4; 6130:2,4 product-driven (1) 6033:22 production (31) 5940:11,13; 5947:14;5948:5; 5953:23;5954:9,11, 15,18,21,24,25; 5955:6;5982:12; 6012:14;6016:10; 6017:12,13;6018:19; 6020:19;6021:6; 6032:14;6034:3; 6035:7;6052:3,4; 6060:21,23;6086:10; 6087:16;6107:1 products (122) 5939:22,23; 5940:3,8;5941:3,4,5, 7,12,24;5942:3,12, 13,22;5943:2,11,17, 24;5944:9,15,18; 5945:10,21;5946:13, 17,21,23;5947:11, 12,16,17;5948:6; 5949:21;5953:17,24;	5954:2,4;5962:25; 5970:3,9,10;5979:5; 5984:22,22;5985:13; 5988:1;5990:23; 5991:2,2,3,18,23,25; 5992:13,21,22; 6000:4,19,22,22; 6002:5;6006:8,18; 6008:2,19;6009:10; 6010:14,16;6011:10, 10,17,18,21,22; 6013:11,17;6018:10, 13;6029:21;6032:9, 23;6033:13,21,23, 24;6034:3,5,8; 6035:18;6039:4; 6043:23;6044:5; 6045:24;6046:6,6,8; 6049:4,13;6060:10, 12,16;6063:19; 6065:1,5,12;6066:9, 14;6069:22;6070:4, 17,24;6086:10; 6094:7;6099:23,24; 6100:2;6116:18; 6119:7;6120:2,11; 6128:4,6 professional (3) 5976:1;6023:18; 6028:22 professor (2) 5972:20,21 profit (6) 6008:6;6031:3,3; 6082:24;6086:15; 6096:9 profitability (6) 5969:21;6023:8; 6024:14;6085:1,5; 6108:6 profitable (23) 6020:21;6073:21; 6097:5;6104:21; 6108:20,20,22; 6109:1,2,3,4,7,9,10; 6111:17,24,25; 6112:1,2,13,15,18; 6114:5 profits (2) 6008:10;6083:2 Program (28) 5927:22,24; 5928:1,5;5939:8,11; 5948:24;5975:19; 5976:8;5977:13,14; 5983:25;6042:18,19, 21;6074:15,18,20, 20,21;6075:18; 6076:1,2,10,16,17; 6079:24;6131:10 Programs (9) 5927:17,19; 5928:8;5938:2;	5939:7;5949:2; 5955:7;5976:5; 6077:3 progress (2) 5935:17;6106:2 progression (1) 5952:15 project (6) 5983:8,8,25; 5991:10;6013:5,17 projected (2) 6031:3;6059:13 projects (2) 5973:12;6082:25 promised (1) 5951:10 promising (2) 6132:3,4 prompts (1) 6129:22 promulgation (3) 5938:4,14; 6023:25 proper (1) 5930:11 properly (1) 6017:11 Proponents (5) 5928:12,18; 5929:1;5934:5; 6027:17 proportion (2) 6000:19;6001:3 Proposal (25) 5928:12,18,22; 5929:2;5932:22; 5933:24;5938:12; 6048:3;6075:16; 6081:12,13;6083:18; 6084:12,20;6087:11; 6088:7,8,11,23; 6090:19;6092:7; 6110:12;6113:18; 6114:20;6122:8 proposals (2) 5934:5;6081:13 proposed (1) 6121:16 proprietary (16) 5956:23;5969:22; 5998:5;6010:5; 6023:9;6024:8,9,24; 6025:7;6028:12; 6030:21;6031:10; 6056:22,23;6057:3,7 proprietor (2) 6031:2,4 proprietors (1) 6030:15 prorate (1) 6004:18 prorating (1) 6004:17
--	---	--	--	--

<p>protect (1) 6082:11</p> <p>Protection (5) 6074:15;6075:18; 6076:10,17,20</p> <p>protein (19) 5968:22;5990:24, 25;6039:8,14,14,18; 6046:2,2;6081:25; 6082:2,18;6088:24; 6095:7;6096:20,21; 6097:10,18;6115:20</p> <p>proteins (3) 6039:9,9,15</p> <p>proved (1) 6129:12</p> <p>provide (16) 5948:25;5950:7; 5958:19;5969:6; 5981:22;5982:22,24; 5987:1;6000:25; 6001:23;6007:10; 6022:23;6026:3; 6079:4;6081:4; 6099:15</p> <p>provided (10) 5939:5,14; 5943:17;5951:14; 5973:13;5985:24; 6000:24;6054:14; 6068:9;6079:14</p> <p>provides (5) 5979:17;5987:25; 6037:18;6039:19; 6082:12</p> <p>providing (3) 5983:12;5993:7; 6112:20</p> <p>provolute (3) 6011:22;6012:23; 6124:8</p> <p>proximity (1) 6060:14</p> <p>publication (3) 5946:24;5949:5, 19</p> <p>Publications (3) 5932:7;5934:19; 6127:17</p> <p>publicly (6) 5968:11,12,14,19, 21,24</p> <p>publics (1) 6066:14</p> <p>published (6) 5947:13,23; 5952:20;6045:24; 6069:7;6122:23</p> <p>publishes (1) 6116:21</p> <p>pull (4) 6020:3,16; 6050:24;6075:20</p>	<p>pulled (1) 6026:19</p> <p>pulling (2) 6001:5;6032:5</p> <p>pump (1) 6040:14</p> <p>pumped (1) 6040:15</p> <p>punish (1) 5969:17</p> <p>purchase (13) 5956:1,16; 6007:24,24;6008:1; 6056:25;6072:21; 6086:20;6088:14; 6108:4;6114:8,9; 6118:12</p> <p>purchased (9) 5959:14;5966:12; 5999:17,20;6087:17; 6103:17;6106:13; 6127:1,2</p> <p>purchasing (2) 5966:23;6108:5</p> <p>purpose (3) 5943:9;5957:24; 6133:11</p> <p>purposes (2) 5932:3;6029:15</p> <p>pursue (1) 5976:18</p> <p>push (1) 6060:15</p> <p>pushed (1) 6070:2</p> <p>put (22) 5982:18;5994:20, 20;6023:16;6026:4; 6029:16;6042:9; 6046:14;6065:3; 6066:21;6071:15; 6073:14;6075:16,24; 6105:7,17,21,24; 6106:5;6129:20; 6132:8;6133:17</p> <p>puts (1) 6133:2</p> <p>putting (1) 5990:11</p>	<p>quarter (1) 5953:4</p> <p>quick (1) 6116:16</p> <p>quickly (1) 5934:13</p> <p>quite (12) 5963:24,25; 5967:22;5973:22; 5974:3;6044:18; 6051:23;6055:10,11, 23;6072:25;6110:15</p> <p>quota (5) 6094:14;6132:2,3, 5,17</p>	<p>6003:6,7;6041:5,6; 6056:19;6088:18; 6113:4,9;6117:4,9, 15</p> <p>reach (1) 5935:25</p> <p>reaching (1) 6119:11</p> <p>read (24) 5937:17;5945:2; 5949:11;5950:7; 5951:5,11;5959:24; 5960:8,10;5965:9; 5968:12;5983:7,24; 5984:4;6019:25; 6020:2;6048:11; 6084:5;6085:25; 6089:23,25;6090:9, 16;6119:25</p> <p>readily (1) 5935:5</p> <p>reading (3) 5937:18;6064:2; 6078:21</p> <p>ready (8) 5933:2;5971:14; 5986:24;6027:21; 6077:22;6132:13,13; 6133:15</p> <p>real (10) 5934:13;5956:4, 12;5983:21;5985:1, 12;6006:7;6009:2; 6050:9,15</p> <p>reality (1) 6006:11</p> <p>realize (5) 6005:5,9;6063:12; 6081:16;6125:24</p> <p>realized (1) 5991:24</p> <p>real-life (1) 6067:18</p> <p>really (27) 5934:22;5985:9; 6002:7;6005:14,14; 6010:7;6011:13; 6016:24;6019:20,22, 25;6035:9,14; 6044:18;6045:8; 6047:12,12;6097:5; 6099:9;6110:23; 6114:16;6122:19; 6123:3;6129:18; 6130:21;6131:15; 6133:19</p> <p>reason (10) 5982:20;6006:12; 6016:13;6071:20; 6108:5;6110:22; 6112:19;6117:10; 6120:6;6133:19</p> <p>reasonable (1)</p>	<p>6002:9</p> <p>reasonably (1) 6055:24</p> <p>reasons (2) 6069:19;6104:19</p> <p>reblend (1) 5956:21</p> <p>reblended (2) 5969:23;6023:10</p> <p>reblending (1) 6024:15</p> <p>Recall (13) 5953:9;5965:21; 5974:13;5990:11; 5994:25;6014:10; 6021:21;6035:4,8; 6043:6;6045:1; 6058:14;6063:5</p> <p>receive (3) 5960:11;6065:24; 6101:9</p> <p>received (8) 5936:9;5958:22; 5959:18;5965:25; 5997:9,16;6091:11; 6103:7</p> <p>receiving (3) 5942:7;5958:18; 5961:6</p> <p>recent (6) 5954:9;5965:19, 20;5967:12; 6028:10;6093:15</p> <p>recently (4) 5957:15;5991:7; 6092:21;6112:5</p> <p>recess (1) 6134:14</p> <p>recipes (1) 6129:9</p> <p>recognize (3) 5954:1;5987:3; 6014:16</p> <p>recognized (3) 5955:7,18; 6057:19</p> <p>recollection (1) 6101:5</p> <p>recommended (3) 5935:13;5939:16; 6073:16</p> <p>record (22) 5927:2;5932:2; 5933:16;5934:2,23; 5935:5;5971:6,16; 5984:19;5988:5; 6001:7;6022:18; 6028:2;6048:6; 6053:16;6055:1; 6077:23,25;6078:21; 6093:24;6095:8; 6134:13</p> <p>recording (2)</p>
	Q			
	<p>qualify (1) 6055:17</p> <p>quality (4) 6015:15;6087:23; 6095:5;6116:11</p> <p>quantities (4) 5947:15;5950:14; 5990:25;6038:18</p> <p>quantity (4) 5955:24,25; 5956:4;6101:17</p>	<p>R</p> <p>Rabbi's (1) 6123:5</p> <p>raise (7) 5933:22;5934:10; 5936:18;5955:9; 6027:8;6078:7; 6085:22</p> <p>raised (1) 5970:15</p> <p>raising (2) 6104:17;6105:1</p> <p>ran (4) 5953:12;5993:13; 6092:25;6110:19</p> <p>random (1) 6016:20</p> <p>range (14) 5959:1;5961:7,18; 5963:8,24;5964:1; 5989:2;5992:1; 5995:24;6001:8; 6002:3;6004:20; 6046:18;6055:23</p> <p>ranged (1) 6093:2</p> <p>ranges (1) 5961:19</p> <p>ranked (1) 5968:9</p> <p>rapidly (1) 6123:25</p> <p>rate (1) 6051:18</p> <p>rather (8) 5938:12;5993:11; 6003:24;6011:1; 6019:8;6089:2,8; 6094:9</p> <p>rational (1) 6068:6</p> <p>rationale (1) 6068:9</p> <p>raw (15) 5942:22;5963:20; 5967:21;5968:3;</p>		

<p>5931:6;5932:3 recover (2) 5965:7;6128:14 rectangle (2) 5946:6;5980:17 rectangles (2) 5945:22;5946:15 red (1) 5954:22 redirect (1) 6130:17 re-done (1) 6129:19 reduce (5) 5940:16;6038:3; 6050:14;6051:1; 6084:22 reduced (2) 6086:17;6088:3 reel (1) 6009:6 refer (5) 5996:3;6045:19; 6051:6,9;6052:20 reference (5) 5949:8;6007:13; 6019:12;6021:19; 6046:8 referenced (4) 5978:11;6020:9, 15;6110:8 references (1) 5947:25 referencing (1) 6063:5 referring (3) 5982:25;5984:20; 5996:2 refinement (1) 6066:21 reflect (10) 5957:8,13;5982:5; 5984:19;5990:22; 5993:18;6002:17; 6021:15;6066:13; 6071:10 reflected (2) 6010:11;6075:10 reflects (1) 5958:2 Reform (5) 6022:13,22; 6059:10,12;6060:19 refreshments (1) 5931:13 regard (1) 5997:10 regarding (2) 5990:18;6111:4 regardless (1) 6003:17 region (16) 5941:8;5943:18;</p>	<p>5948:18;5951:17; 5953:25;5954:7; 5957:4;6017:19; 6044:9;6050:17,18; 6058:7;6060:22; 6073:19,20;6074:7 regional (19) 5947:14;5955:4; 5957:8,13;6021:20, 24;6022:2,9,13; 6058:23;6070:16; 6071:10;6075:17,24, 24;6079:19;6080:2, 3,4 regionally (3) 5957:19,23; 5992:10 regions (23) 5940:8,16,19; 5942:11;5947:11; 5950:13,15;5953:2; 5956:20;5957:11; 6009:9;6016:15,19; 6023:22;6050:20,21; 6068:17;6071:1,14, 25;6072:10,22; 6074:2 Register (3) 5933:19,22; 5934:20 regular (9) 5927:12;5957:1; 5991:9;6012:7; 6030:7;6057:4; 6088:3;6128:10; 6130:8 regularly (2) 6012:11;6096:16 regulate (1) 6024:20 regulated (34) 5955:13,20; 5956:6,12,13; 5958:13;5959:15; 5969:14;5970:3; 5988:12;6023:21; 6024:1,11;6052:13; 6057:20;6058:23,24; 6060:3;6071:13; 6073:19,22;6087:18, 22;6088:21;6120:3, 14,17;6121:5,17; 6125:22,25;6126:20; 6127:3,11 regulates (2) 6076:3;6103:18 regulation (15) 5939:3;5941:10; 5956:2,21;5959:2, 12;5970:1;5974:24; 5975:1,15;5977:25; 5978:2;5999:2,12; 6026:2</p>	<p>regulations (4) 6070:23;6073:5; 6087:25;6115:1 regulators (2) 5969:15;5970:19 Regulatory (2) 5927:17;6026:14 relate (4) 6025:17,18,19; 6053:9 related (5) 5976:13;6002:6; 6089:2,7;6111:5 relating (2) 6005:24;6013:17 relationship (1) 6126:2 relationships (3) 5939:15;5949:21; 6037:20 relative (16) 5943:24;5944:12; 5945:18;5948:5,22; 5949:22,24;5953:10, 16,25;5969:7; 6017:13;6060:14; 6100:20;6120:12; 6121:1 relatively (6) 5946:2;5966:9; 5981:19;6024:21; 6061:2;6131:25 release (1) 6024:21 relevant (1) 5938:3 reliable (1) 6123:1 relied (1) 5987:15 rely (2) 6068:23;6109:4 relying (1) 6009:11 remainder (1) 5961:21 remaining (1) 5961:4 remains (2) 5932:22;6039:19 remarkable (1) 5970:21 remember (11) 5972:13,14; 5974:8;5993:16; 5994:24;6000:11; 6034:24;6035:19; 6056:16;6108:18; 6131:12 remembered (1) 5935:11 reminder (2) 5931:17;6070:15</p>	<p>removed (1) 6003:5 removing (1) 6053:17 reorder (2) 6037:1,2 repeat (1) 5975:5 repeated (1) 5932:13 replicate (1) 6009:6 replicates (1) 6009:12 replicating (2) 5985:6;6050:17 report (16) 5947:12,15; 5958:24;5978:10; 5986:2;6012:1,6,8, 10;6021:23;6035:6, 20;6055:10,19; 6062:22;6063:1 reported (27) 5942:12;5963:15, 25;5968:11,13,14, 19,20,21,23,24; 5989:10,12,16,21; 5990:3;6000:25; 6011:17,19;6045:24; 6055:25;6062:12; 6063:11;6069:1,12; 6087:17;6127:2 reporter (4) 5931:6;5937:11; 6027:2;6079:8 reporting (8) 5991:6;5998:3; 6012:11;6018:12; 6021:12;6055:23; 6063:15;6069:10 reports (6) 5941:13;5976:15; 5993:22;6012:7; 6087:20;6099:13 represent (15) 5929:23;5940:9; 5941:22;5944:4,8,8; 5952:4;5955:23; 5956:10;5966:14; 5981:2,4;5989:6; 5991:12;6049:3 representation (1) 6051:21 representative (7) 5929:15,16; 5944:2;5967:23; 6001:20;6028:6; 6100:24 represented (13) 5941:20;5942:23; 5943:16;5944:5; 5945:14,15;5946:6;</p>	<p>5965:18;5992:17; 5993:19;6000:21; 6004:13;6052:11 representing (6) 5929:7,19; 6005:17;6014:2; 6079:1;6104:6 represents (9) 5943:23;5944:7; 5966:17,17,19,22; 5980:15;6004:16; 6012:13 reproduce (1) 5934:23 reproducing (1) 6009:14 reputation (1) 6129:10 requested (1) 5975:5 requesting (1) 6102:20 require (1) 6087:10 required (6) 6026:2;6082:20; 6088:6;6092:2; 6102:3;6112:8 requirement (1) 6038:21 requirements (1) 5941:7 requires (2) 5955:3;6028:24 requiring (1) 5942:7 re-read (1) 5949:13 research (9) 5938:13,16; 5939:9;5941:13; 5970:17;5988:1; 5991:10;6013:5,13 researchable (1) 6013:9 residual (1) 6030:14 resolve (2) 5933:15;5934:8 resonate (1) 5933:11 resonated (1) 5933:12 resort (1) 6030:6 resource (1) 5949:2 Resources (1) 6099:18 respect (15) 5934:16;5935:2; 5973:10;5975:15; 5990:20;5997:24;</p>
--	---	--	---	---

5999:1,1,4,16,23; 6000:14;6007:23; 6013:22;6025:13	return (1) 6132:3	5940:2,3;5942:17, 17,19;5943:2,19; 5991:14;6102:13	6063:25;6072:9; 6083:25;6084:22; 6086:17;6088:20; 6096:13;6114:25,25; 6118:22;6119:10,15, 23;6120:12;6125:18, 19;6128:10;6129:8; 6130:2	scenario (2) 6076:7;6084:21
respecting (1) 5943:12	reveal (3) 5998:4,9,9	Rob (4) 5929:25;6070:10; 6118:7,8	6086:17;6088:20; 6096:13;6114:25,25; 6118:22;6119:10,15, 23;6120:12;6125:18, 19;6128:10;6129:8; 6130:2	scenarios (1) 5993:1
respective (1) 5950:15	revealed (1) 6054:15	robots (1) 6014:22	6118:22;6119:10,15, 23;6120:12;6125:18, 19;6128:10;6129:8; 6130:2	SCHAEFER (2) 5928:6,6
respond (2) 5969:4;6084:19	reverse (3) 5962:23;5967:14; 6116:4	robust (1) 6034:21	same (45) 5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	S-C-H-A-E-F-E-R (1) 5928:6
responded (6) 5992:18;5997:25; 6039:24;6057:25; 6058:1;6133:9	review (2) 5933:3;5948:2	Rockies (1) 5957:21	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	schedule (1) 5932:18
respondents (10) 5959:6,8,10,11,13; 5968:15,17,20; 5969:6;6041:20	reviewed (1) 6009:20	RO'd (1) 6116:3	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	SCHIEK (6) 5929:8,8;6051:11; 6052:22;6132:2,5
responding (1) 6003:20	revised (2) 6010:16;6011:10	role (1) 6073:11	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	S-C-H-I-E-K (1) 5929:8
response (12) 5929:10;5933:8; 5939:4;5948:25; 5999:10,19;6043:4, 20;6051:17;6057:17, 24;6095:1	revisions (1) 5990:18	roles (2) 6079:17,18	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	Science (2) 5937:5;5947:25
responses (8) 5958:18,20,22; 5968:5;5986:5; 6041:4;6051:15; 6094:17	right (69) 5930:5,8,14,20; 5931:22;5934:15,24; 5936:6,18;5937:20; 5945:4;5964:11; 5971:5;5977:16; 5982:17;5983:15; 5989:4;5994:11; 5996:9;6001:24; 6002:10;6003:8; 6007:17;6010:19,23; 6014:21,22;6016:23; 6021:10;6022:4,12, 17;6026:11,22; 6027:5,20;6037:20; 6046:4;6047:10; 6055:20;6060:19; 6062:13;6064:10; 6072:19;6077:4; 6078:1,7;6083:16; 6085:22;6090:14,21; 6092:22;6094:22; 6097:24;6098:9,18, 21,21;6099:22; 6104:10;6106:10; 6108:20;6113:21; 6115:2;6117:18; 6131:10,18;6134:10, 12	room (1) 5969:13	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	scratching (1) 6047:13
responsibilities (1) 6079:22	royals (1) 5987:3	rough (1) 6052:10	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	screen (2) 6031:19;6034:13
responsible (1) 6079:2	rules (1) 6026:16	roughly (5) 5998:21;6001:13; 6004:13,23;6005:1	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	season (1) 6081:9
rest (4) 5954:12;5983:25; 6023:13;6065:1	run (9) 5944:20;5991:15; 5993:18;6008:22; 6092:12,15;6093:11; 6108:9,17	route (2) 5941:14;5943:2	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	seasonality (2) 5974:15,18
restate (1) 6031:6	runs (6) 5952:17;5953:13; 5994:11;6020:5; 6086:7;6097:13	routes (1) 5942:19	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	seasonally (2) 6029:11;6081:7
restrictive (1) 6011:13	running (1) 6130:16	Royals (1) 5987:3	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	seated (2) 5936:17;6078:6
restricts (1) 5942:21	rupture (1) 6050:6	rules (1) 6026:16	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	second (11) 5937:5;5999:19; 6031:19;6039:3; 6050:15;6090:4; 6092:1;6102:11; 6118:24;6125:12; 6128:1
result (3) 6004:2;6026:1; 6089:12	ripple (1) 6050:6	route (2) 5941:14;5943:2	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	Secretary (3) 5933:21;5939:5; 6090:22
resulted (1) 6047:8	risen (1) 5954:2	royals (1) 5987:3	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	Section (1) 6132:5
results (20) 5938:13;5947:18; 5949:1;5978:25; 5979:13,23,24; 5985:3,12,18; 5989:10,12,21; 5991:18;5993:23; 6009:20;6010:11; 6014:17;6061:15; 6067:23	rising (1) 6076:11	rules (1) 6026:16	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	sector (9) 5938:8;5939:13, 18;5970:17;5973:9; 5978:17;6057:19; 6062:14;6084:13
retained (3) 6013:16;6022:23, 24	risky (1) 6133:21	run (9) 5944:20;5991:15; 5993:18;6008:22; 6092:12,15;6093:11; 6108:9,17	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	secure (1) 6122:3
retreated (1) 5993:11	Rita (1) 6081:2	running (1) 6130:16	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	seeing (6) 5964:10;5967:17; 5980:12;5986:21; 5990:23;6049:14
	River (1) 5972:22	runs (6) 5952:17;5953:13; 5994:11;6020:5; 6086:7;6097:13	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	seek (2) 5999:15;6072:5
	Rives (2) 5929:19,23	Ryan (1) 6091:24	5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	seeking (1) 6089:13
	RO (2) 6054:1;6116:4		5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	seeks (1) 6034:4
	road (9)		5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	seem (1) 6113:20
			5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	seeded (1) 6017:19
			5937:15;5946:11; 5952:22;5953:12,21; 5955:21;5956:22; 6000:13,13;6008:5, 9;6015:19;6016:18; 6022:6,15;6024:1; 6030:15;6033:18; 6036:17;6051:1; 6054:20,24;6055:3; 6063:3,10;6064:14, 15;6071:1;6072:1; 6073:23;6076:12,13; 6086:20;6087:21; 6100:20;6102:18; 6111:25;6112:6; 6113:17;6119:1; 6124:9;6125:21; 6126:1;6130:2,4	seems (9)

5930:2;6013:11; 6027:3;6031:7; 6069:25;6117:18; 6119:18,20;6120:1 segment (3) 6084:11,11; 6085:15 select (2) 6050:13;6091:24 sell (35) 6072:3,6;6082:4; 6097:4,17;6100:2,3; 6107:16,18,20; 6108:16;6114:12; 6119:13,14;6120:18, 21,24;6121:4,18,19, 21,23,24;6122:22; 6124:9;6125:7,9; 6128:11,15;6130:3, 5,10,12,12,13 selling (17) 5959:21;5960:14; 5961:5;6006:8; 6015:8;6100:6; 6101:16;6105:1; 6109:20;6115:3; 6117:19;6120:1; 6126:11;6127:10,10; 6129:2;6130:10 sells (1) 6109:13 semi-processed (1) 5963:17 semi-static (1) 6006:22 send (3) 5942:4;6051:25; 6120:6 sending (4) 5942:6;5961:20; 5966:24;6041:11 sends (1) 5942:6 senior (2) 6079:6;6099:16 sense (4) 6031:1;6064:8; 6072:18,19 sensibility (2) 5947:21;5986:16 sensible (1) 6017:19 sensitive (4) 5947:18;6087:5; 6119:9;6121:10 sent (2) 5932:3;6102:20 sentence (12) 5964:20,20; 6023:4;6083:7; 6084:5;6089:25; 6090:17;6110:8; 6121:14;6125:15;	6129:16,18 sentences (2) 6045:17,18 separate (5) 5991:9;6012:19, 20;6069:1;6103:20 separated (2) 5957:16;6041:15 separating (2) 5962:18;6041:21 separator (1) 6082:14 September (19) 5944:2;5947:3; 5952:15;5965:2,13, 21;5979:13,14,19, 19,23;5988:23; 6079:12;6083:3,8; 6092:6,17;6110:10, 20 sequence (1) 6040:17 series (2) 6122:24;6123:1 serve (6) 5951:24;5957:24; 6083:24;6086:5,7; 6126:3 served (1) 6030:1 Service (12) 5927:20;5939:7; 5941:13;5947:13; 6066:18;6067:4; 6079:4;6082:9; 6096:12;6099:14,18; 6125:17 services (6) 6013:16,17; 6029:2,4;6074:16; 6086:10 servicing (1) 6030:7 SESSION (2) 5927:1;6028:1 sessions (1) 5932:9 set (6) 5956:7,25; 5967:24;6072:16; 6074:24;6099:22 sets (1) 6070:25 setting (2) 5956:13;6076:4 seven (2) 6029:7;6056:19 seven-year (1) 5974:3 several (19) 5938:9;5966:7; 5968:2,5;5969:12; 5974:9;6007:18;	6012:10;6029:24; 6034:25;6079:15; 6080:18;6081:4,19; 6082:21;6088:3; 6112:7,14;6121:5 severe (1) 6074:8 shaded (1) 5961:22 share (3) 6095:8,12; 6119:15 shared (1) 6091:13 sharing (1) 6123:15 sharp (1) 6129:11 Sharpen (1) 6024:6 SHEA (2) 5930:17,18 S-H-E-A (1) 5930:18 sheets (1) 5930:23 shift (2) 5969:21;6023:9 shifted (1) 5995:21 ship (5) 5942:25;6002:16; 6065:11;6067:8,15 shipment (1) 5962:24 shipments (4) 5943:19;5944:10; 6045:2;6049:14 shipped (8) 5944:12;5962:25; 5963:7;5967:17; 5992:13;6000:8; 6040:8;6116:9 shipping (8) 5942:22;5963:17; 5967:20;6053:2,14; 6054:22;6056:9; 6104:20 short (8) 5944:3;5946:1,2; 6045:4;6130:16,24; 6131:25,25 shortages (1) 6074:7 shortly (1) 5974:14 short-term (1) 6050:10 shoulda (1) 6129:18 show (17) 5933:1;5934:7; 5940:19;5946:14;	5955:4;5981:3; 5988:21;5993:5; 5995:2,12;6018:24; 6019:12;6027:5; 6046:15;6055:1; 6132:20,25 showed (8) 5950:9;5952:21; 5953:13;5981:20; 6017:7,8;6035:20; 6128:21 showing (14) 5945:9,16,21,22; 5946:9;5961:18; 5982:20;5984:1; 5991:4;5993:5; 5995:8;6014:1; 6016:21;6020:19 shown (20) 5944:4,16; 5946:11,14;5950:4, 23;5952:8,10; 5953:2,5;5961:19; 5964:16;5983:21,22; 5986:20;5999:18,19; 6015:9;6031:25; 6059:13 shows (20) 5944:13;5945:10; 5950:15;5952:6; 5953:2;5954:8,20, 23;5955:5;5959:2; 5961:8,11,13; 5962:25;5963:6,12; 5965:5;5968:5; 6070:16;6128:21 shred (1) 6066:24 shredded (1) 6067:14 shrink (6) 6040:3,4,25; 6041:12,13,14 shrinkage (1) 6040:24 shut (1) 5982:16 shy (1) 5972:9 side (2) 5999:5;6025:5 significance (1) 5999:3 significant (11) 5940:6;5950:13; 5951:19;5963:11; 5969:21;6019:10,11; 6023:9;6035:22; 6054:12;6121:8 significantly (2) 5970:13;5979:23 similar (8) 5933:14;5952:14;	6033:13;6035:4,5; 6042:2;6044:24; 6060:15 similarly (1) 6041:25 simple (1) 5969:4 simplicity (1) 5952:9 simplification (2) 5984:9;6006:11 simplistic (2) 6049:9;6073:24 simply (14) 5944:7;5945:24; 5967:23;5978:24; 5982:18;5984:1; 5986:13;5999:10; 6013:4;6036:15; 6040:23;6067:6; 6074:5;6092:25 Simulated (2) 6062:17,19 Simulator (5) 5939:13,18; 5973:9;5978:17; 6062:14 simultaneously (2) 5946:21;6049:13 single (6) 5939:3;5941:22; 5946:6;5981:6; 6001:22;6069:4 singular (1) 6050:19 sit (2) 5933:6;5972:1 site (2) 5944:22;6040:11 sites (3) 5935:16,23; 6069:12 sitting (1) 5930:2 situation (1) 6125:24 situations (1) 6093:8 six (3) 5933:10;5977:6; 6121:7 six-pound (1) 6124:10 size (5) 5942:21;5944:11; 5945:19;6055:23; 6128:24 sized (1) 6089:11 sizes (4) 5945:18;5963:13; 6003:18;6050:14 skim (7)
---	---	--	--	---

<p>5941:2,9;5991:17; 6043:23;6097:24; 6127:12,14 skimmed (1) 6127:12 skimming (3) 6053:11,15,23 sky (1) 6038:2 slide (3) 5991:4,16;5993:6 slides (6) 5989:17,18; 5990:18,19;5992:21; 5993:6 slightly (4) 5950:16;6062:21; 6064:20,22 slope (1) 6039:2 slower (1) 6079:8 small (25) 5970:4,13;5971:3; 5982:25;5983:23; 5984:6;5992:1,6; 6000:19;6019:7; 6035:23;6037:1; 6082:1,19,22; 6084:14;6088:1; 6089:10;6090:25; 6100:6;6101:16,17; 6113:19;6115:20,24 smaller (7) 5958:13;5961:15; 5987:19;6001:21; 6019:6;6054:22; 6117:25 smallest (3) 5970:8;5994:3,5 snapshot (2) 5935:17;6007:5 sodium (1) 6039:12 soft (1) 6033:13 software (1) 6019:15 sold (11) 5950:14;5968:3,8, 16;6042:10;6056:4; 6082:8;6097:20; 6099:23;6109:14; 6127:12 solely (1) 6007:23 solemnly (2) 5936:19;6078:8 solids (44) 5941:9;5942:6; 5962:25;5963:2,3,5, 5,7,14,21,22,23; 5964:15,15,23;</p>	<p>5965:1,6,12,24; 5966:12;5967:7,16; 5968:10,18,21,23; 5969:5;5988:10,14, 21,21;6040:8,18,21; 6041:10,17;6046:23; 6047:5;6048:23; 6055:25;6056:13; 6062:5;6082:14,15 soluble (1) 6039:12 Solution (37) 5943:8,21,21,22, 23;5944:13,17; 5945:8,12;5946:9, 19,22;5948:7,8; 5949:23;5951:22; 5952:6;5956:5; 5957:13;5993:8; 6007:11;6008:5,9, 21,21;6009:4; 6014:12,13;6032:10; 6037:23;6039:10; 6045:3;6048:6,7; 6049:15,19;6071:10 solutions (8) 5943:20;5944:1, 14;5946:16;5947:4, 5;5957:5;5991:22 solve (3) 5946:19;6034:5; 6056:17 solved (1) 6037:23 solves (4) 5939:20;6018:9; 6032:14,25 solving (4) 5940:16;5976:14; 6018:11;6038:4 somebody (5) 6013:16;6099:2; 6130:5,9;6133:23 someday (1) 6107:14 someone (3) 5966:24;5996:24; 6081:5 Someone's (1) 6098:3 someplace (3) 6036:3;6037:12; 6130:13 sometime (1) 6105:24 sometimes (8) 5935:23;6026:10; 6070:2;6097:4; 6112:1,2;6126:8,8 somewhat (6) 5942:7;5956:7; 5972:9;5980:19; 5990:17;5993:12</p>	<p>somewhere (12) 5981:15;5995:24; 5999:24;6012:16; 6025:18;6029:16; 6030:22;6037:6; 6055:1;6117:6,7; 6118:16 soon (2) 6010:23;6109:20 sorry (9) 5966:25;5972:13; 5983:18;5989:1; 5996:22;5997:13; 6006:23;6049:1; 6078:2 sort (13) 5932:17;5946:11; 5951:25;5978:17; 5980:12;5994:5; 6025:15;6037:21; 6044:13;6045:22; 6064:15;6132:8,24 sound (3) 6118:18;6120:1; 6131:1 sounded (1) 6002:14 source (2) 6033:15;6127:4 sources (5) 5940:24;5941:11; 5952:18;6101:9; 6124:12 South (4) 5950:17;6014:16; 6017:6;6079:25 Southeast (8) 5950:3;5955:5,10; 5981:10;6016:22; 6035:22;6037:5; 6074:2 southern (3) 5982:19;6018:3; 6131:4 Southwest (2) 6024:13;6025:1 space (2) 5982:6;5984:4 Spatial (21) 5937:21;5938:15, 18;5939:19; 5948:22;5949:21; 5950:23;5953:10,16; 5955:2,11,11,18; 5956:10;5958:2; 5970:18;5976:10; 6019:19;6062:25; 6063:9,13 spatially (2) 5939:13;5940:17 speak (1) 6104:25 special (2)</p>	<p>6095:6,6 Specialist (1) 5927:22 specialize (1) 6066:23 specialty (1) 6088:2 specific (6) 5969:6;5983:22; 5991:23;6013:17; 6016:6;6118:11 specifically (7) 5976:7,13;5998:6; 6051:13;6059:4; 6118:22;6133:11 specified (3) 5968:18,24; 5985:8 spell (3) 5936:23;5984:12; 6078:11 spelling (2) 5930:11;5971:1 spent (3) 5972:23;6080:2,3 spike (1) 5966:10 spiralling (1) 6026:1 split (1) 5999:6 spot (1) 6111:6 spreadsheet (1) 6092:13 spreadsheets (1) 6012:12 spring (4) 6087:19,19; 6127:3,9 square (1) 5980:17 squares (2) 5944:7,11 staff (2) 5975:23;6079:24 stage (1) 6055:18 stagnate (1) 6084:14 stakeholders (1) 5970:16 stand (9) 5931:15;5937:16; 6081:13;6129:11; 6131:14,18,19; 6132:3;6133:24 standard (3) 5932:17;5956:7; 6062:4 standardized (2) 6062:7,18 standards (4)</p>	<p>5991:25;6087:23; 6116:10,11 standpoint (4) 5985:5,5;6073:7, 18 start (13) 5945:13;5972:8; 5997:3,23;6017:22; 6023:24;6037:20; 6083:6;6098:18; 6099:25;6104:16; 6105:2;6131:16 started (16) 5933:16;6079:12, 25;6081:15; 6098:22;6099:5; 6101:5,6,14;6102:1; 6104:10,12,16,24; 6105:16;6123:6 starting (1) 6038:15 starts (3) 6090:2,17;6092:2 state (37) 5936:23;5939:3; 5940:11,13;5941:10; 5943:19;5954:15,20; 5958:9,12;5959:16; 5969:15;5971:22; 5975:9;6001:8; 6006:22;6014:5; 6017:17;6026:12; 6036:19;6043:12; 6047:20;6052:13,14, 15;6073:24; 6078:11;6080:8,18; 6083:1;6084:3; 6088:6,21;6089:12; 6112:9;6121:11; 6128:11 stated (3) 6022:16;6075:23; 6092:5 statement (19) 5937:1,9,12,18; 5970:20;5977:17; 5979:22;5989:5; 6040:7;6042:16,20; 6061:6;6078:3,21; 6092:1;6094:16; 6112:11;6126:25; 6131:25 statements (1) 6056:17 States (28) 5927:6;5931:25; 5940:15;5942:20,23; 5953:20,22;5954:6, 16;5957:20,21,23; 5959:1;5981:11; 5982:7;5992:9; 5998:2,8,10,20; 6014:3;6032:8;</p>
--	--	---	---	--

6071:16;6080:6; 6087:3;6107:23; 6119:2;6125:2 static (4) 5955:12;5979:8; 6006:22;6007:11 statistical (1) 5961:20 statistics (3) 5935:13;5947:13; 5958:21 status (3) 5959:2;5999:2; 6126:20 statute (1) 6074:23 stay (3) 6013:24;6114:12; 6127:7 stayed (1) 6080:12 stays (1) 6039:23 steady (3) 5952:15;6096:2,5 step (2) 6077:8,15 STEPHENSON (96) 5930:12,12,14; 5931:16;5932:20; 5936:7,21,24,24; 5937:3,13,14,20,23; 5944:23;5945:4,7; 5949:7,11,14,17; 5951:7,13,21; 5952:3;5960:2,10; 5962:3,7;5964:6,9, 11,14,21;5965:20; 5966:6,17;5967:5, 11;5968:1,14; 5970:21;5971:4,8, 21;5972:5;5974:22; 5976:25;5977:2,6, 10,22,24;5978:1,9; 5981:14,17;5984:13; 5987:5;5996:1,3,10, 16,21;5997:4,11; 6003:9,11,16; 6004:5,9,23; 6026:25;6027:13,14, 17;6028:3,7; 6047:15,24;6056:16, 23;6057:12;6061:8, 11;6068:21,24; 6069:9,18;6070:10; 6077:6,7,9,14; 6128:18;6131:15 S-T-E-P-H-E-N-S-O-N (2) 5930:13;5936:25 Stephenson's (2) 5936:9,23 steps (5) 5935:25;5936:2;	6042:2;6097:2; 6102:18 Steve (2) 6075:23;6132:1 Still (18) 5930:7;5936:10; 5946:1;5950:20; 5958:18;5972:2; 6005:13;6033:6; 6051:20;6070:15; 6115:1;6125:21,22; 6126:20;6131:4,6; 6133:25,25 stirred (1) 6124:11 stock (1) 6032:9 Stocks (2) 5942:9,14 Stoel (2) 5929:18,23 stop (2) 5935:8;5944:23 stops (1) 6044:17 storable (2) 5942:13;6029:21 stored (1) 6045:23 stores (3) 6067:2,2;6125:5 story (2) 6098:24;6099:6 strategy (1) 6119:11 stray (3) 6132:20,22,23 stream (16) 5962:19;5967:16; 6002:15;6003:6,24, 25;6004:8;6014:18; 6040:23,24;6041:6; 6053:11,12,15; 6065:11;6066:3 streams (4) 6002:17,22,24; 6055:25 street (1) 5973:20 stress (1) 5986:11 strict (1) 5939:6 Strong (5) 5954:15;5985:9; 6061:6;6096:8,8 structure (12) 5940:25;5969:23; 5979:2;6007:14; 6010:1;6023:10; 6024:9,25;6025:6; 6042:23;6057:6; 6071:2	struggle (1) 6069:18 struggled (1) 6062:22 studied (1) 5975:18 studies (7) 5947:23;6012:8; 6111:4,8;6114:22; 6115:7;6116:24 study (6) 5963:10;5986:11; 6051:12;6052:23; 6117:24,24 studying (1) 5951:12 subcomponent (1) 6039:15 subject (4) 5938:20;5948:2; 6008:16;6043:17 subjects (1) 5974:12 submitted (1) 6020:16 substantial (1) 5955:3 substantially (4) 5993:11;6058:23, 24;6117:22 subtracted (1) 6063:15 subtraction (1) 6047:8 sudden (1) 6102:14 Sue (4) 5932:19;6131:17, 19;6132:14 suffered (3) 6031:13;6068:12, 15 sufficiently (3) 5969:21;5987:3; 6023:8 suggest (5) 5947:20;5957:3; 5967:13;6002:9; 6010:4 suggesting (2) 6024:17;6038:8 summary (1) 5938:16 summarized (1) 6006:6 summary (4) 5958:19;5969:9; 6023:5,17 summer (2) 6087:19;6127:4 supplied (1) 5943:15 suppliers (12)	6081:24;6084:21; 6085:8,10,19; 6086:2;6094:19,22; 6095:10;6106:13; 6113:24;6114:1 supplies (6) 5948:13;5953:19, 20;5957:3;6060:4; 6122:4 supply (37) 5938:21;5939:24; 5940:5,10,16,19; 5941:19;5942:18; 5943:23;5944:7,15; 5945:25;5948:9,18, 21;5951:19;5953:9, 16;5955:22; 5956:15;5981:18,20; 6014:11;6021:8; 6024:1;6029:11,15; 6030:14;6056:24,25; 6057:9;6060:14; 6071:2,4;6096:10, 17;6130:9 supplying (3) 6032:6,10; 6120:15 support (4) 5938:11;6048:2; 6075:4;6088:22 supporting (3) 5940:20;5979:18; 6005:23 supports (3) 6081:11;6088:8; 6090:19 supposed (1) 6048:18 sure (50) 5933:9;5973:11, 14;5974:14; 5975:21;5979:21; 5980:11,14;5985:3; 5987:21;5988:4; 5990:21;5991:21; 5992:8;5994:17; 5995:14;5996:19; 5999:2;6006:16; 6010:3;6013:23; 6014:8,8;6015:16; 6017:25;6018:15,17; 6019:4;6033:6; 6035:3;6036:21; 6045:17;6048:7; 6058:15;6062:11; 6066:12;6072:9; 6077:2;6079:8; 6081:5;6091:1,4; 6094:13;6098:5,8; 6110:15;6115:9; 6117:12;6123:5; 6132:12 surface (24)	5949:25;5950:9; 5952:8,22;5957:14; 5983:25;5993:1; 5994:14;5995:13; 6016:21;6020:12,13; 6038:17;6039:1,2; 6059:17;6062:15,16; 6063:2,24;6064:3; 6068:2,10;6071:11 surfaces (1) 6041:16 surpassed (1) 5929:3 surplus (9) 5948:5;5950:13; 5951:18;5954:5,6,7; 5957:2;6016:15; 6030:13 surprised (2) 6001:17;6093:12 surprisingly (2) 5959:20;5960:13 survey (15) 5938:23;5958:22; 5967:10,17;5968:2; 5985:22;5997:24,25; 5999:13;6000:21; 6041:4;6051:15; 6052:3,4;6055:5 surveyed (1) 6051:17 surveying (1) 5958:16 surveys (7) 5958:24;5985:20; 5986:1,4;5998:5; 6116:21;6122:24 survey's (1) 5985:17 sustain (1) 6084:15 sustainability (1) 6083:2 sustainable (1) 6082:25 swear (5) 5936:8,17,19; 6078:6,8 sweet (2) 5958:10,12 SWENSON (2) 5928:2,2 S-W-E-N-S-O-N (1) 5928:3 swimming (2) 6014:18;6015:11 switched (1) 6033:4 system (27) 5946:22;5955:15; 6005:24;6022:6; 6023:22;6024:11; 6037:15;6040:4;
--	---	---	---	--

6057:6,20;6059:14; 6068:4,7;6071:13; 6073:11;6082:16; 6088:6;6097:1; 6105:14,17,23; 6107:11;6111:6; 6112:9;6120:17; 6126:19;6130:7	5976:1 Technology (2) 5947:25;5970:7 telling (2) 5984:4;6011:9 tells (1) 5987:9 temporarily (1) 6094:12 ten (4) 6098:15,16; 6106:9;6121:16 tend (2) 6087:5;6098:2 tendency (2) 6086:3;6090:11 tends (2) 6041:16;6075:5 tentative (1) 5955:8 ten-year (1) 6020:20 term (7) 5984:12;5989:23; 6006:25;6025:13,15, 21,22 terminology (1) 5998:19 terms (10) 6001:1;6006:25; 6007:13,20;6008:23; 6009:15;6015:25; 6017:13;6057:20; 6106:25 terribly (1) 5987:1 test (2) 6062:8,9 testified (12) 5938:9;5974:6,9, 18;5986:20; 6018:17;6080:17; 6096:20;6106:14; 6108:3;6115:9; 6117:4 testifier (1) 6025:16 testify (11) 5930:25;5931:1; 5934:14;6058:14; 6089:14;6110:15; 6118:12;6131:2; 6133:10,14,15 testifying (5) 6060:1;6077:19; 6111:9;6128:19; 6132:16 testimony (62) 5927:9,11;5933:2; 5936:9;5937:21; 5938:3,11,19; 5940:20;5945:1; 5947:8;5972:2;	5973:16;5974:16; 5976:12;5978:11; 5979:17;5989:24; 5997:1;6005:15,21, 22;6009:11;6011:7; 6015:6;6017:10; 6023:23;6034:19,21, 22;6051:4;6052:21; 6061:4;6062:24; 6065:8;6071:7; 6079:14;6083:11; 6089:15,17;6090:5; 6091:14;6092:24; 6100:10;6101:24; 6105:4;6106:9; 6111:3,5;6113:20; 6115:14;6118:21; 6119:4,18,25,25; 6120:4,13;6125:12; 6128:1;6130:24; 6131:20 tests (1) 6129:13 Texas (5) 5981:16;5982:8; 5983:2,3;6050:23 Thanks (3) 5929:24;6077:14; 6124:7 theme (1) 5976:18 theoretical (2) 5985:5;6041:1 theory (2) 6008:4;6070:22 Thereafter (5) 5936:15;5997:8, 15;6078:4;6091:10 therefore (1) 6010:24 theses (2) 5950:2;5976:5 thinking (7) 5933:14,23; 5936:4;6010:8; 6064:24;6099:1; 6102:13 third (6) 5998:13,15,16; 6090:5;6091:25; 6110:7 Thomas (1) 5928:19 T-H-O-M-A-S (1) 5928:19 THOMPSON (5) 5928:15,15; 6103:25;6104:2,3 though (8) 5946:2;5971:13; 6030:15;6041:2; 6055:9;6076:23; 6093:2;6131:4	thought (7) 5934:1;5935:2; 5948:10;5958:19; 5985:21;5986:25; 6077:17 thoughts (1) 6092:23 thousand (2) 6008:22;6081:4 three (13) 5942:10;5972:22; 5974:7,8;5980:24; 5994:5;6035:14; 6044:6,8;6045:18; 6097:1;6109:8; 6124:24 throughout (5) 6006:19;6043:14; 6078:23;6107:23; 6125:2 Thus (1) 5948:20 tides (1) 6076:12 tie (1) 6119:23 timeframe (2) 5973:6;6105:20 timeline (1) 5939:6 times (24) 5963:14;5973:12, 22;5974:1,7; 5988:17;5999:3; 6007:18;6056:18; 6062:24;6069:23; 6079:18,19,20; 6081:19;6096:2,2,8; 6100:12;6109:3; 6111:20,20,24,24 timing (2) 6104:9;6110:24 tiny (1) 6061:19 title (20) 5935:22;5949:17; 5951:3,5;5952:24; 5954:18;5959:3; 5961:9;5965:10; 5968:7;5977:1,2,9, 10,12,12;6011:2; 6034:25;6061:22; 6062:17 titles (2) 5937:19;6079:16 today (27) 5929:2;5930:3; 5932:19;5933:5,15; 5934:8;5937:16; 5938:11;5980:25; 5996:18;6001:24; 6006:14;6008:24; 6009:21;6027:13;	6048:1;6070:5; 6077:5,11;6078:20; 6087:21;6091:14; 6102:24,25;6106:12; 6123:15;6127:20 today's (2) 5952:16;5970:7 together (4) 5934:5;5990:12; 6012:22;6032:5 told (11) 5932:21;5973:7; 5994:19;6048:10; 6099:1;6102:19; 6112:23;6130:23; 6131:1;6134:5,8 tomorrow (8) 5934:14;6131:16, 19,22;6132:2,13; 6134:4,9 took (5) 5999:25;6092:10, 13,14;6110:22 tool (1) 5947:23 tools (1) 5955:17 top (13) 5937:19;5959:24; 5960:9;5961:17; 5968:1;5989:5; 6021:19;6025:11; 6042:16;6044:25; 6045:16,19;6089:23 topic (2) 6133:5,8 total (25) 5939:24;5962:25; 5963:21;5964:15,17; 5966:11;6002:23,25; 6003:12,12,18,18, 21;6040:8;6041:10; 6048:12;6055:24; 6063:6,10,25; 6088:19;6113:5; 6117:5,12;6123:22 totaled (1) 6063:23 totally (2) 6002:17;6034:18 touch (1) 6127:7 tough (1) 6075:11 toward (7) 5945:15;5981:9, 10;6017:6;6070:4; 6112:6;6113:3 Towards (5) 6014:7,7;6040:7; 6048:25;6049:8 town's (1) 6098:14
T				
table (11) 5931:11;5959:1,2, 3,12;5968:5,7,10; 6052:12;6053:10; 6056:2 talk (20) 5958:3;5974:17; 5990:12;5994:25; 6002:20;6005:5,7,8; 6013:4;6048:4; 6054:20;6077:11; 6105:13;6111:3; 6113:3,17;6114:20; 6118:10;6125:12; 6127:1 talked (11) 5934:17;5973:18, 18;5990:17;6052:24, 25;6059:23;6106:8; 6107:7;6112:22; 6127:18 talking (17) 5999:7;6002:5,7, 25;6003:4,6,9; 6005:3,4;6033:7; 6059:3,3;6060:8,9; 6099:24;6115:19; 6118:25 talks (1) 6011:7 target (1) 5956:2 task (2) 6013:13,15 taste (1) 6129:13 tastes (1) 6129:7 TAYLOR (19) 5927:21,21; 5932:19;6047:16,18, 21,21,23;6123:9,11, 14;6127:19,22; 6131:13,16,17,17, 19;6132:14 T-A-Y-L-O-R (1) 5927:21 technical (1) 6097:15 technically (1) 6097:25 techniques (1)				

track (1) 6044:12	16,18,23;5980:15; 5981:2,3,4;6035:20	turning (6) 5980:23;5981:12; 5985:16;5987:2,7; 5992:24	5962:24;5963:11, 19;5964:15; 5965:11;5967:12,15; 6055:19;6097:1	5977:5,9
tracking (1) 5992:9	triangles (4) 5944:6,11; 5980:24;6048:25	turns (2) 5933:12,13	unacceptable (1) 6037:18	University's (1) 6013:16
tracks (1) 5942:2	tried (6) 5955:15;5956:6; 6025:18;6075:9; 6082:10;6133:2	twang (1) 6131:6	unbranded (1) 6082:8	unknown (2) 5932:25;6131:24
tractor (1) 5962:13	trigger (2) 6076:20,23	Twelve (1) 5960:11	uncompetitive (5) 6083:24;6125:16, 20,23;6126:3	unknowns (3) 5932:25,25; 6077:17
trade (2) 5942:18;6044:4	triggered (1) 6116:17	two (43) 5931:7,11; 5934:13;5943:20; 5945:9,9;5946:16; 5947:23;5950:12; 5951:18;5952:4; 5957:5;5961:14,19; 5966:17;5974:7,8; 5978:23;5980:8,8; 5989:6,17;5990:17, 19;5992:21; 5995:22;6010:24; 6025:19;6026:9; 6045:16,18;6062:21; 6066:6;6068:17; 6081:1,3;6084:1; 6089:22;6091:1; 6092:14;6093:13; 6106:11;6109:8	under (27) 5936:19;5939:6; 5956:21;5958:9; 5959:16;5999:17; 6007:7;6023:5,14; 6052:13;6058:15; 6073:5;6074:20; 6078:8;6082:4; 6083:1,18;6088:6, 21;6092:7;6093:9; 6094:5;6110:11; 6112:8;6122:8; 6127:10;6130:3	unlawful (1) 6087:21
traditionally (1) 6071:24	triggers (2) 6076:1,18	trip (1) 6130:20	undergraduate (2) 5975:16,20	unless (3) 5995:1;6087:22; 6131:17
trailer (1) 5962:13	truck (6) 6040:14,14,15,18, 18;6042:9	trucks (1) 6041:17	underlying (3) 5979:1;5990:14; 6073:17	unlike (1) 6087:13
transaction (3) 5965:7;6046:10; 6055:1	true (12) 5961:23;6033:18; 6037:11;6043:11; 6051:1;6060:13; 6063:4;6072:2; 6073:18;6093:13; 6113:7,20	truth (2) 5936:20;6078:9	undermine (1) 5985:18	unprocessed (1) 6002:18
transactions (2) 5956:23;6040:17	try (27) 5944:25;5946:19; 5950:7;5976:10; 5981:22;5983:8; 5985:3;5986:9; 6006:12;6009:4; 6018:18;6021:11; 6024:6;6025:17; 6028:18;6032:10; 6044:12;6062:23; 6067:15;6069:20; 6072:7;6079:10; 6105:6;6108:8; 6114:11;6129:5; 6133:21	type (11) 5935:24;6021:11; 6049:18;6055:18,22; 6068:24;6095:23; 6107:2,5,7;6128:24	understood (6) 5984:18;5987:6, 22;6007:13; 6046:19;6057:25	unprofitable (1) 6030:16
transcripts (3) 5931:6,9;6075:20	trying (23) 5934:8;5967:3; 5970:8,9;5976:19, 20,20;5981:23; 5985:9;5988:2; 5993:5,9;6004:25; 6013:7;6045:1; 6052:17;6053:8; 6063:1,20;6073:9, 13;6076:9;6108:17	types (4) 5943:20;6052:8; 6064:19;6096:21	uniform (2) 5969:16;6070:25	unquestionably (1) 6001:22
transfer (3) 6024:17;6055:5,9	Tuesday (2) 6099:5;6133:24	typical (1) 6095:23	unintended (1) 5976:21	unreadable (1) 5981:22
transferred (2) 5942:22;5968:4	turn (4) 5990:16;6020:7; 6055:12;6115:5	typically (7) 6013:7;6029:19; 6049:23;6056:20,21; 6059:18;6065:25	unions (2) 6069:2,13	unregulated (3) 5959:16;5999:16; 6059:2
transferring (2) 5961:5;6055:7	turned (1) 6049:19	typing (1) 5937:11	unique (1) 6095:20	unusual (1) 5961:21
transform (1) 5966:24		typo (1) 5964:11	unit (1) 5948:9	up (60) 5930:7;5931:2; 5932:11;5933:1,6,8; 5934:7;5951:13; 5956:11;5961:15; 5965:14;5972:15; 5982:20;5986:3; 5994:6,11,14,17; 5995:15;5999:3; 6004:6,20;6008:15; 6017:4;6018:25,25; 6019:8,20;6020:3, 16;6027:19;6029:9, 12;6031:10;6037:22, 25;6044:25; 6045:18;6047:2; 6048:4;6049:5,11; 6051:10;6055:1; 6057:23;6058:12; 6072:16;6073:14; 6075:20;6094:3; 6108:11;6110:18; 6121:6;6124:16; 6129:11;6130:4,6; 6131:20;6132:20,25
transformation (2) 5967:19;6008:2		U	United (9) 5927:6;5931:24; 5992:9;6014:3; 6071:16;6087:3; 6107:23;6119:2; 6125:2	updates (1) 5991:14
Transportation (30) 5942:16;5943:4; 5947:20;5948:18,21; 5953:9,12,15; 5957:2;5962:7; 5963:2,24;5964:7; 5965:3,13;5966:2, 20;5987:8;5988:13; 6002:6;6005:18; 6008:1;6050:24; 6086:9,23;6128:2,8, 14,16;6132:19		UF (1) 6054:1	units (2) 6067:5;6117:25	updated (12) 5935:13;5952:4; 5962:11;5978:22,24; 5987:9;5989:6; 5991:8,15;6007:17; 6042:17,22
transporting (3) 5948:14;5962:19; 5964:1		UF'ing (2) 6053:2,22	universal (1) 6042:8	updates (1) 5991:11
treated (1) 6039:12		U-L-I-N (1) 5929:6	universe (2) 6003:1;6046:6	
trees (3) 5933:19;6109:22; 6110:5		ultimate (1) 6044:13	University (11) 5930:13;5937:7, 24;5938:6;5962:8, 10;5972:21,23,25;	
Tremaine (2) 5928:25;5929:6		ultimately (1) 5943:15		
tremendous (1) 5946:3		ultra-filtered (1) 5990:24		
tremendously (1) 6093:25		ultra-filtration (9)		
trends (1) 6060:22				
Trerise (1) 5962:9				
triangle (10) 5944:6;5945:15,				

<p>updating (2) 6042:21,23</p> <p>upon (4) 5942:14;5969:19; 5977:13;6026:4</p> <p>Upper (9) 5928:7;5950:12, 20;5998:14;6016:16, 25;6051:22; 6072:20;6087:24</p> <p>upside (1) 6061:18</p> <p>upstream (2) 6014:18;6015:11</p> <p>URL (1) 5935:24</p> <p>USDA (42) 5927:13,20,23; 5928:1,5,8;5930:7, 23;5932:3,5,10,12; 5934:19;5935:12; 5957:16;5973:10,11, 15,19;6011:18,19; 6021:19,24;6022:1, 9,17;6047:21; 6068:3,3;6070:25; 6071:12,15,21; 6072:16;6073:8,12; 6074:15;6075:24; 6076:3;6099:20; 6123:14;6127:25</p> <p>USDSS (26) 5939:13,19; 5940:6,23;5942:2, 10,20;5944:2; 5947:9;5948:1,23; 5949:1,22;5951:7; 5952:4,24;5973:13; 5974:16;5984:7; 5989:5;6005:22; 6042:17;6059:13; 6061:23;6062:2; 6067:23</p> <p>use (32) 5932:2;5940:13; 5941:21;5951:17; 5958:24;5967:14; 5982:18;5991:17; 5992:3,6;5994:6; 6005:15;6006:25; 6011:2,25;6012:5; 6017:10,11;6021:20; 6025:14;6031:25; 6038:15,19;6045:17; 6049:3;6064:5; 6065:1;6074:25; 6106:16;6115:1; 6116:5;6129:9</p> <p>used (47) 5928:25;5939:15; 5940:10;5941:3,11; 5943:7;5947:22; 5949:1;5953:13;</p>	<p>5957:17,18,19; 5968:6,7;5969:25; 5973:15,19,19; 5974:16;5977:12; 5987:12;5989:23; 5991:2;5992:12,12; 5994:3;5996:3; 5998:19;6009:19; 6019:6;6025:13; 6037:3;6038:10,11, 24;6043:14; 6058:15;6059:18; 6062:17;6074:8; 6082:13,16;6092:15; 6097:4;6099:17; 6129:9;6131:23</p> <p>useful (2) 5958:19;5987:24</p> <p>uses (3) 5940:24;5942:10; 6106:12</p> <p>using (11) 5935:5;5949:20; 5953:12;5961:25; 5962:7;5964:2,21; 5994:3;6011:1; 6034:2;6075:3</p> <p>USS (1) 6005:24</p> <p>usually (4) 5944:20;6030:23; 6039:10;6040:13</p> <p>Utah (1) 6088:20</p> <p>utilization (2) 5958:17;6126:24</p> <p>utilize (1) 6009:3</p> <p>utilized (2) 5949:23;5976:16</p>	<p>6056:4,8;6061:23; 6062:20;6063:7,10, 11,15,16,24,25; 6064:2,3,24;6068:2; 6119:22</p> <p>value-added (2) 6053:19,21</p> <p>values (65) 5940:12,13; 5941:8,14;5943:24; 5947:15,19;5948:22, 23;5949:22,24; 5950:2;5951:14; 5952:7,8,9;5953:2,5, 10;5954:13,17; 5955:4,11,12,19,20; 5956:4,9,10;5957:9; 5964:2,21;5967:24; 5970:18;5983:9,20, 21,23,24;5984:1,21; 5993:13;6002:23; 6005:17;6009:12; 6019:19;6020:1,4,5; 6021:20,25;6022:6; 6037:24;6047:4; 6050:21;6062:23,25; 6063:9;6064:6,17; 6068:25;6069:7,10, 12;6119:5</p> <p>valuing (1) 6055:8</p> <p>valves (1) 6024:21</p> <p>VANDENHEUVEL (8) 5929:25,25; 6070:7,9,10;6118:3, 5,8</p> <p>V-A-N-D-E-N-H-E-U-V-E-L (1) 5930:1</p> <p>variables (1) 6071:23</p> <p>variation (3) 5957:13;6071:10; 6096:15</p> <p>varies (1) 6081:7</p> <p>varieties (2) 6012:11;6081:21</p> <p>variety (3) 5941:11;5967:18; 6072:25</p> <p>various (10) 5934:5;5939:22; 5961:5;5963:13; 6013:20;6066:24; 6069:16;6079:18,18; 6081:21</p> <p>vast (1) 6086:7</p> <p>vats (1) 6109:9</p> <p>vehicle (1) 5942:21</p>	<p>verify (1) 5986:16</p> <p>Vermont (9) 6015:20,21,21; 6019:1,6,21; 6036:22;6037:6; 6038:22</p> <p>versa (1) 5999:5</p> <p>Version (7) 5962:9,12;5987:8, 9;6034:12;6044:12; 6083:12</p> <p>versus (5) 6010:5;6011:5; 6016:25;6093:9; 6118:11</p> <p>Veterans' (2) 5931:19,21</p> <p>VETNE (21) 5929:15,15; 6028:3,5,6;6031:20, 22,23;6033:4,8,10, 12;6057:24;6061:17, 18,21;6100:15,19, 24,24;6101:1</p> <p>Vetne's (1) 6053:6</p> <p>via (3) 5931:4;5932:3; 5940:2</p> <p>vice (1) 5999:5</p> <p>vicinity (1) 6118:16</p> <p>Victor (2) 5929:5,22</p> <p>view (5) 5932:22;5933:9; 5987:1;6006:10; 6015:11</p> <p>views (2) 5934:18;6123:15</p> <p>Virgil (1) 5928:2</p> <p>V-I-R-G-I-L (1) 5928:2</p> <p>Virtually (1) 5962:18</p> <p>visible (1) 5955:4</p> <p>visual (1) 6070:14</p> <p>voice (2) 6131:2,3</p> <p>voir (4) 5975:3,6,12; 5978:16</p> <p>V-O-I-R (1) 5975:8</p> <p>volatile (1) 6115:5</p> <p>volatilities (1)</p>	<p>6069:21</p> <p>volatility (4) 6069:15,19,25; 6084:8</p> <p>volume (36) 5930:2,5;5936:22; 5944:12;5945:19; 5947:11;5959:4; 5963:18;5980:16; 5982:21;6000:20; 6001:8,14;6002:25; 6003:12,18,18,21, 24;6004:2,12,14,19, 20;6005:4,8; 6009:13,15;6019:7; 6030:17,22;6032:1; 6052:4;6055:20; 6056:9;6073:2</p> <p>volumes (8) 5959:1;5985:1; 6002:21,22;6003:2; 6017:15;6044:6; 6118:11</p> <p>voluntary (1) 5956:12</p> <p>VU (3) 5929:21,21,22</p> <p>VULIN (15) 5929:5,5;6078:14, 16,16,19;6085:9; 6089:20;6090:4; 6091:3,12,16,18; 6130:18,19</p>
W				

<p>5930:18 way (43) 5933:12,23; 5935:23;5936:1; 5939:23;5946:2; 5950:17;5954:10; 5968:15;5979:7; 5982:18;5984:4; 5985:18;5998:7; 6002:13,23;6009:3; 6014:1,2;6020:8; 6024:18;6026:6; 6034:6;6043:8; 6046:18;6048:11; 6066:16;6067:3; 6070:4,23;6072:16; 6082:11;6088:13; 6089:23,23;6096:16; 6098:16;6111:25; 6123:4;6128:17,22; 6129:16,21 ways (7) 5933:17;5978:23; 5981:22;6065:9; 6082:10;6085:13; 6105:5 WC (1) 6089:2 web (3) 5935:16,23; 6069:12 website (20) 5931:9;5932:4,6,7, 12,12,13;5935:21, 21;5940:20; 5952:21;5962:11; 5994:18;5995:8,11; 5996:1,2,3,4;6065:3 WEDNESDAY (4) 5927:1,3;5931:19; 6028:1 week (9) 5931:8,18,20; 5987:4;6029:7; 6056:18,20;6132:18, 20 weekend (1) 6133:22 weekends (1) 6057:9 weeks (2) 5931:7;5933:10 WEGNER (2) 5928:19,19 W-E-G-N-E-R (1) 5928:19 weight (4) 5942:21;5943:19; 5944:11;5945:18 weighted (3) 5955:2;6001:23; 6117:23 welcome (7)</p>	<p>5930:25;5931:12; 5932:7;5934:1,9; 5937:9;5972:4 well-known (1) 5947:24 weren't (6) 5986:20;6053:14; 6071:19;6109:3; 6110:25;6112:18 West (22) 5950:16;5955:1; 5980:22;5998:8,15, 18,19,21;6014:3,6, 16;6016:15;6044:7, 16;6045:15; 6051:22;6060:12,15; 6080:23;6086:11; 6098:15;6129:24 western (9) 5953:20,22; 5954:6,16;5957:1, 21,23;6045:6; 6063:16 wet (2) 6046:6,8 what's (16) 5936:1;5959:25; 5965:25;6007:20; 6013:20,20;6020:24; 6035:25;6050:17; 6051:14;6056:6; 6059:4;6071:23; 6077:21;6112:11; 6127:8 Whenever (2) 6030:8;6094:4 whereas (1) 6048:13 Whereupon (4) 5971:15;6027:22; 6077:24;6134:14 wherever (1) 6029:19 whey (225) 5929:14;5937:22; 5938:16;5958:4,5,6, 10,12,14,17; 5959:18,19,22,25; 5960:2,5,6,11,12,15, 16,20,22,23,24; 5961:1,5,10,24; 5962:13,19,20,22,23, 23,25;5963:4,7,17, 19,20,20,22;5964:2, 15,24;5965:8,23; 5966:2,22;5967:16, 21;5968:3,8,11,14, 19,22;5970:1,3,6,11, 18;5988:14; 5990:23;5997:24; 6000:3,16,22; 6001:3,10,14,25; 6002:4,6,15,17,22,</p>	<p>24;6003:1,2,6,12,14, 15,19,21,24,25; 6004:1,2,8,8,13; 6005:11,11;6039:9, 14;6040:7,8,10,11, 13,13,16,23,24; 6041:3,5,5,6,6,15,16, 21,24;6042:1,5,8,10; 6045:20,23;6046:2, 2;6047:7;6048:5; 6051:3,12;6052:3, 23,25;6053:7,11,12, 14,15,17;6054:4,22; 6055:25;6056:4,9, 11;6063:18,19; 6064:5,6,6,6,11,15, 18,20,22,23;6065:1, 4,5,6,8,9,11,11,15, 17,19,21,24,25; 6066:3,4,9;6068:22, 23,25;6069:3,4,7,8,8, 15,21;6081:1,24,25; 6082:2;6088:16,23, 24,24;6089:1,1,3,7, 8;6093:4,4,17,18,21, 23;6094:9,10; 6096:21,25;6097:6, 9,13,21,24;6100:3; 6106:4;6107:7,8; 6108:11;6109:5; 6114:21,21,25; 6115:2,19,20; 6123:20,21;6124:12 wheys (1) 5990:24 whey's (1) 5970:2 whisker (2) 5961:16,17 whiskers (1) 6046:15 White (2) 5930:18;6018:24 whole (8) 5930:24;5931:20; 5935:24;6027:14; 6037:15;6070:21; 6098:23;6100:11 wholesale (2) 6067:1,1 whose (2) 5970:10;6129:12 wide (1) 5967:18 William (1) 5929:8 willing (14) 5948:12;5956:15; 6029:10;6037:25; 6038:1;6057:8; 6064:10;6073:2; 6095:8;6120:19,24; 6121:18,21,23</p>	<p>win (1) 6024:18 windows (1) 5992:6 winners (2) 6071:15;6076:5 Wisconsin (18) 5930:13;5937:25; 5938:6;5972:21,25; 5977:5;5998:11,14; 6015:7,10;6017:1,2; 6036:5;6051:12; 6052:23;6065:10; 6080:8;6081:16 wish (10) 5937:14;5956:1, 15;5997:4,10; 6046:14;6058:7,7; 6091:6;6123:1 wishes (1) 6131:17 within (9) 5942:23;5954:11; 5981:15;6004:19; 6019:11;6060:5; 6071:1;6072:10; 6106:9 without (10) 5943:14;6001:5; 6026:20,21;6040:24; 6052:17;6061:1,6; 6076:5;6083:2 witness (17) 5932:18,21; 5938:11;5967:3,3; 5995:3;6039:6,6; 6051:7;6073:12; 6078:1;6131:13; 6133:10,13,14,20,23 witnesses (4) 5931:2;5972:9; 6072:6;6132:24 won (1) 6083:1 wondered (3) 6016:9;6042:17; 6056:17 wonderful (1) 5962:5 wondering (4) 6006:4;6011:5; 6052:19;6053:3 word (10) 5964:20;5999:13, 13;6045:18; 6058:15;6071:8; 6090:3,15,17,21 words (12) 5945:25;5966:21; 6004:14;6038:3; 6069:24;6071:21; 6076:19;6083:6,14; 6089:22;6091:2;</p>	<p>6092:2 work (26) 5931:18,20; 5935:23;5938:7; 5967:11;5973:2,7, 12,16,23;5974:14; 5975:17;5976:12,13, 18;5977:17; 5978:16;5987:21; 5990:1;6021:16; 6030:24;6079:3; 6080:5;6099:11; 6106:2;6114:17 workable (1) 6023:23 worked (13) 5973:4,11,24; 5978:21;5989:24; 6079:13;6080:1; 6101:23;6102:11; 6111:11;6127:6; 6131:5,5 workers (1) 6100:13 working (7) 5935:13;5972:3; 5977:10;6007:15; 6023:18;6101:14,20 Workshop (1) 5978:10 world (12) 5985:1,12;6006:7; 6008:4,9;6009:6,15, 15;6050:9,15; 6069:5,9 Wow (1) 6080:9 WPC (23) 5968:25;6056:6; 6081:25;6082:1,18; 6089:4,7;6096:21, 23;6097:7,12,13; 6108:3,13,14; 6114:21,24;6115:20, 23;6116:2,6;6123:3; 6124:12 WPI (17) 6096:23,25; 6097:2,8,16;6107:8, 16;6114:24,25; 6115:3;6122:18,20, 21,22,23;6123:1; 6125:3 wrap (3) 6066:24;6067:16; 6096:11 wrapped (1) 6067:13 Wright (2) 5928:25;5929:6 write (1) 6048:4 written (13)</p>
--	--	---	--	--

5937:9,12;5945:1; 5947:8;5959:25; 5960:10;5964:8; 5979:22;6081:13; 6083:10;6084:12; 6088:11;6129:16 wrong (1) 6048:8 wrote (1) 6074:23 wwamsusdagov/live (1) 5931:5 wwmy-dairymancom (1) 5932:8	York (6) 6017:17;6019:5; 6044:24;6045:6,14; 6080:5 YouTube (1) 5932:4	5971:16 10:50 (1) 5971:14 100,000 (6) 5959:5,7,21; 5960:13,15;6053:7 10561 (1) 6080:23 11 (9) 5959:6,24;5987:2, 7;5993:6;5994:10; 6045:16;6052:21; 6053:5 12 (7) 5959:11,18; 5964:20;5993:6; 6000:1;6040:8; 6055:14 12.79 (9) 5964:3,17,22; 5965:4;5966:1,13; 5988:13;6046:22; 6047:2 12:20 (1) 6027:21 123 (3) 6051:6,11; 6052:20 12-point (1) 6046:22 13 (4) 5959:16;5988:2; 6046:13;6061:13 132 (1) 5927:10 133 (16) 5936:11,14,15; 5971:6;5977:1; 5996:25;5997:3,6,6, 8;6015:25;6021:17; 6022:19;6031:21; 6057:22;6058:11 134 (9) 6078:3,3,4; 6089:18;6091:5,8,9, 10;6110:7 14 (7) 5959:15;5968:1; 5971:6;5996:9; 6023:4;6056:1; 6083:8 140 (1) 6080:23 15 (13) 5960:15,21; 5965:17;5966:7; 6002:7,16;6022:5; 6027:6,9;6053:6; 6059:8;6060:18; 6083:8 150 (1) 6100:12 15-0071 (1)	5932:1 15-minute (1) 5971:13 16 (3) 5958:25;5959:8; 5998:1 17 (1) 6101:22 18 (4) 5940:25;5972:23, 24;6121:8 18.7 (1) 5954:5 19 (3) 5940:25;5953:18; 6121:8 1946 (2) 6081:15;6104:10 1977 (1) 6131:5 1978 (1) 6104:24 1983 (2) 6081:15;6104:12 1987 (1) 5972:15 1988 (1) 6080:6 1990 (1) 5972:17 1990's (2) 5957:15;6023:20 1993 (4) 5957:16;6035:6, 20;6063:17 1994 (2) 5962:10;5987:8 1995 (14) 5949:20;5950:9, 18;5951:4,8;5952:3, 16;5953:13,14,18; 5954:5;6042:17; 6062:2;6063:17 1996 (6) 5939:4;5948:25; 6035:6,20;6062:13; 6067:23 1998 (4) 5929:3;6067:24; 6079:12;6098:20 1998bpdf (1) 5949:10 1999 (1) 5939:16 19-year (1) 5954:2	5950:15;5951:22; 5957:22;5959:2,12; 5960:15,18;5961:7; 5962:9;5979:16; 5980:23;6011:7; 6013:24,25;6018:21; 6033:10;6034:19,21; 6049:7,15;6052:12; 6053:7;6054:3,6,10, 13;6066:11;6070:13, 16;6089:22;6131:20, 21 2.0 (1) 5987:8 20 (13) 5961:3;5966:7; 5968:23;5969:1; 5987:10;6012:13; 6023:25,25;6034:12, 20;6056:3;6097:10; 6124:22 200 (3) 5961:2;6100:13; 6118:16 200,000 (1) 5942:19 2000 (8) 5965:2,13;5967:7; 5988:23;6022:12,13; 6060:22;6061:4 2001 (4) 5952:5;5954:10, 19;5989:7 2003 (1) 6111:14 2006 (12) 5952:5,17; 5978:11;5989:7,10; 5990:1;5991:8; 5993:24;6034:14,14; 6105:12,24 2007 (1) 5952:20 2008 (1) 5955:8 2009 (2) 6075:7;6094:3 2010 (1) 6106:7 2011 (9) 5952:5;5954:10, 19;5978:10;5989:7, 10;5990:3;5991:7; 6106:7 2012 (3) 5952:20,20; 6094:3 2014 (22) 5944:2,14; 5945:12;5952:5,6, 15;5953:1,12,14,18; 5954:6;5979:14,24; 5989:7,25;5995:12;
Y	Z			
year (18) 5952:5;5989:6; 6029:6;6035:6; 6057:10;6060:25; 6061:1;6081:21; 6094:12;6102:11; 6103:2,3;6110:3,5,6; 6118:17;6123:21; 6126:19 years (44) 5938:7;5949:2; 5953:18;5955:19; 5963:10;5965:17; 5967:12;5969:12; 5972:22,23,24,24; 5977:6;5978:20; 5987:10;6005:24; 6007:15;6012:10; 6023:19;6034:25; 6058:18;6059:6,8; 6060:18,22;6061:2; 6074:3;6079:14; 6080:3,4;6082:21; 6088:4;6101:23; 6103:6;6106:1,2,9; 6111:12,19;6112:7, 15;6119:11;6121:5,7 yellow (2) 5944:10;5946:11 Yep (1) 6108:18 Yesterday (6) 5929:2;5931:14; 5933:8;5978:7; 6015:7;6131:12 yield (4) 5991:17;6041:1; 6114:7,10 yields (3) 6052:10;6064:21; 6107:4 yogurt (7) 5941:5;5991:9,9; 6013:4,6,6,6 yogurts (1) 5991:11	Zealand (1) 6069:2 zero (3) 5952:10;6018:3; 6063:16 Zip (1) 6098:15 ZOLIN (5) 5929:16,16; 5931:14;6132:5,11 Z-O-L-I-N (1) 5929:16 zoning (1) 6059:17	0		
	1			
	1 (26) 5928:12,18,22; 5929:3;5940:18; 5944:4,10,16,24; 5945:3,10;5946:25; 5948:3;5959:1,3,7,9; 5980:7,13;5996:12; 6000:15;6004:12; 6048:15;6054:18; 6070:13;6103:5 1,400 (1) 6109:23 1.5 (1) 6004:15 1:35 (2) 6027:21,21 1:37 (1) 6028:2 10 (16) 5985:16;5992:24; 5999:1;6016:4,5; 6017:1;6021:17,19; 6022:5;6027:6,9; 6052:12,21;6062:17; 6071:9;6093:2 10:40 (1) 5971:14 10:41 (1)			
			2	
			2 (41) 5929:2,3;5944:13, 24;5945:3;5946:9; 5947:1,25;5948:3;	

6032:1;6083:3; 6092:6,17;6110:10, 19 2015 (14) 5927:1,2;5965:2, 13,21;5988:23; 6028:1;6083:3; 6087:19;6092:6,17; 6110:10,20;6127:4 22 (3) 6093:25;6120:22; 6121:6 22.3 (3) 6083:16,19; 6093:2 22.37 (7) 6083:5,11,20; 6092:7,16;6110:12; 6125:13 23 (6) 5953:22;5959:10; 5963:2,4;6000:14; 6117:13 231 (1) 5940:15 24 (1) 6052:20 25 (6) 5961:15,18; 5966:7;5988:20,20; 6012:13 250 (1) 5961:7 250-mile (1) 5962:15 26 (2) 5959:14;6079:14 28 (3) 5929:4;5968:14; 5969:3 29 (1) 5989:17 2-mile (1) 5962:15	3:12 (1) 6077:23 3:30 (1) 6077:22 3:33 (1) 6077:25 3:45 (1) 5933:12 30 (42) 5927:4,9;5928:8; 5929:2;5938:7; 5950:10,17,19; 5951:16;5952:16; 5962:2;5966:8; 5978:9,13;5982:9; 5988:21;5989:13; 5997:2,10,13,14,15; 6010:17;6011:11; 6023:19,20;6024:2; 6034:9,20,22; 6036:2,5,8,15,18,21; 6038:9,14;6039:4; 6043:2,3;6124:23 300 (3) 6081:8;6100:8; 6124:22 30th (1) 6092:17 33 (2) 5997:13;6061:12 34 (6) 5953:23;5968:22, 25;6056:6;6061:13; 6116:2 34.4 (1) 5954:6 35 (1) 6027:2 365 (1) 6029:5 37 (1) 6093:2 3's (1) 5968:7 3x (3) 5963:14,14; 6055:24	6131:11 40 (3) 5982:9;6017:22; 6027:3 40,000 (1) 6021:7 40-pound (1) 6067:7 424 (1) 5941:17 45 (1) 5963:9 46 (2) 5962:15;6104:16 48 (2) 5940:15;6032:8 4b (12) 5952:19;5958:10; 6033:25;6092:12,19; 6093:15;6094:2,12; 6095:2;6096:15,19; 6113:10 4's (1) 5952:24	640's (1) 6067:8 65 (1) 5961:6 65-mile (1) 5962:17 67 (1) 5953:19 69 (1) 5962:22	88 (6) 5947:16;5958:22; 5962:16;5963:4; 5985:25;6051:15
			7	9
			7 (15) 5949:25;5962:24; 5963:6,9,16;5982:4; 5984:2;5989:4; 6038:17;6040:8; 6042:15;6061:22; 6064:1;6132:11,12 7.2 (1) 5954:4 70 (4) 5952:13;5962:2,3; 6016:3 75 (2) 5965:14;6095:13 77 (1) 6016:7 78 (3) 6104:18;6105:1,3	9 (18) 5959:17;5965:5,9, 11,16,18;5988:5; 5992:20;6005:12; 6010:16;6011:10; 6013:3;6021:17; 6039:4;6043:1; 6046:13;6071:7; 6132:5 9:00 (1) 5927:3 90 (6) 5982:8;5995:23; 6096:23;6097:8; 6107:8,16 91 (3) 6080:11,16,22 95 (7) 5961:22;6088:19; 6113:4,12,15; 6117:5,9 96 (3) 6001:6;6004:4,5 98 (2) 6020:14,14 99 (1) 5947:17
		5	8	
		5 (15) 5953:1;5954:8,18, 22;5955:5;5965:14; 5981:12;5984:11,15, 16;6004:17;6020:7, 18;6047:1,2 5:02 (1) 6134:13 50 (4) 5961:13;5966:10; 6017:2;6098:3 500-pound (1) 6067:7 54 (1) 5962:21 58 (1) 5989:18	8 (8) 5963:12;5964:5, 13;5965:9;5990:16; 6020:7,18;6055:15 8,000 (3) 6081:3;6084:1; 6118:13 8.69 (3) 5964:4,6,10 8.96 (5) 5963:22;5964:10, 14,16,23 80 (6) 5994:13;5995:23; 6016:4,5;6017:23; 6094:3 81 (1) 6062:16 82 (1) 5953:21 83 (4) 5960:18;6054:2; 6104:18;6105:3 85 (7) 5961:1;6001:13; 6002:4,15;6003:20; 6004:14,16 87 (1) 5962:23	
3	4	6		
3 (23) 5949:5;5950:4,24; 5951:3;5952:11; 5959:9,10;5963:14; 5968:5,10;5983:22; 6000:1,15;6004:17; 6018:21;6019:24; 6022:19;6043:12; 6054:18,18;6056:2; 6131:21;6132:14 3,112 (1) 5940:15 3.5 (2) 6062:4,9 3.83 (3) 5963:5;5964:3,22	4 (28) 5927:1,2;5929:3; 5952:6,11,17; 5962:12;5968:20; 5980:4;5982:4; 5984:14;5987:9; 6004:11,17;6015:24; 6018:21,23;6028:1; 6031:18,21;6044:15; 6048:15;6061:22; 6062:7;6064:1,7; 6066:11;6132:10 4:57 (1)	6 (9) 5957:22;5961:8,9; 5962:8;5972:24; 5983:22;6004:18; 6062:2;6132:6 6.7 (2) 5963:21,23 60 (5) 5952:21;5962:2; 5963:20,22;6017:1 62 (7) 5958:24,25; 5986:1,1,5;5998:2; 6051:15 628 (1) 5941:20		