

1
2
3 **BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION**

4
5 **In the Matter of the Application of PacifiCorp)**
6 **dba Utah Power & Light Company for) Case No. PAC-E-01-16**
7 **Approval of Interim Provisions for the Supply)**
8 **of Electric Service to Monsanto Company.) TESTIMONY OF**
9 **DANIEL R. SCHETTLER**
10

11 **Q: PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND**
12 **EMPLOYMENT.**

13 **A:** Daniel R. Schettler, Monsanto Company, 800 North Lindbergh Blvd, St.
14 Louis, MO 63167.

15 **Q: WHAT IS YOUR CURRENT POSITION WITH MONSANTO**
16 **COMPANY AND WHAT DO YOUR RESPONSIBILITIES**
17 **INCLUDE?**

18 **A:** Vice President, Procurement. I am responsible for purchase of raw
19 materials, energy, and goods and services required for the manufacture
20 of Monsanto products.

21 **Q: PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL**
22 **BACKGROUND AND BUSINESS EXPERIENCE.**

23 **A:** I have a degree in economics from Drury University and a graduate
24 degree in finance at Washington University. I have been employed by
25 Monsanto for 35 years, and I have worked in virtually every business
26 sector in the company. I have been responsible for agriculture

1 procurement since 1986, and was named Vice President of Procurement
2 in 2000.

3 **(1) PURPOSE OF TESTIMONY**

4 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

5 **A:** The purpose of my testimony is to: (1) describe the worldwide
6 phosphorous market; (2) discuss market changes and competitiveness
7 resulting from new technology and foreign supplies; (3) describe how
8 phosphorous from the Soda Springs plant is used and marketed; (4)
9 describe why the Soda Springs plant must secure a stable source of
10 reasonably priced electricity to remain competitive and viable; (5)
11 describe curtailment terms acceptable to Monsanto from an operational
12 and economics perspective; and (6) provide the Commission with
13 Monsanto's recommended terms for electric service to Monsanto.

14
15 **(2) PHOSPHOROUS MARKET AND COMPETITIVENESS**

16 **Q: PLEASE DESCRIBE THE PHOSPHOROUS MARKET IN THE**
17 **US AND WORLDWIDE.**

18 **A:** The global phosphorous market has experienced dramatic change in
19 the last 10 years. What began as an industry concentrated in the
20 United States and Europe for most of the 20th century has been
21 transformed rapidly to one dominated by the Chinese. In 1990 the
22 global elemental phosphorous market was 3.5 billion pounds, 85% of

1 which was produced in Europe and North America. By 2001 the
2 market had shrunk to 1.6 billion pounds, 75% produced in China.
3 Today, outside of China, two elemental phosphorous plants remain in
4 Europe and one in the United States – Monsanto’s plant in Soda
5 Springs, Idaho.

6 There are two primary reasons for this change - technology and the price of
7 electricity:

- 8 1. New technology, referred to as the wet acid process, has provided
9 industry with the phosphorus molecule at a significantly lower cost
10 than the cost of elemental phosphorous. Customers switched to wet
11 acid, and the demand for elemental phosphorous dropped by nearly
12 2 billion pounds.
- 13 2. High priced electricity led to the demise of U.S. and European
14 elemental phosphorous plants. Many of these have been replaced by
15 new furnaces in China, where power and labor costs are very low.
16 Electricity represents 30% –45% of the cost of producing elemental
17 phosphorous. As such, it is the largest single leverage factor, and the
18 only significant cost outside of the manufacturer’s control.

19
20 **Q: PLEASE DESCRIBE HOW CHANGES IN TECHNOLOGY**
21 **HAVE AFFECTED THE PHOSPHOROUS MARKET AND THE**

1 **IMPACTS EXPECTED IN THE FUTURE FROM NEW**
2 **TECHNOLOGY.**

3 **A:** On a global basis, 70% of elemental phosphorous is used to make
4 thermal phosphoric acid. The remaining 30% is used to produce
5 derivative products, the largest being phosphorous trichloride, one of
6 the raw materials Monsanto uses to manufacture glyphosate herbicide.
7 The wet acid process is an alternate, lower cost route to phosphoric
8 acid. Its use has grown dramatically and will continue to grow in the
9 future. This process is not suitable as a replacement for the 30% of
10 elemental phosphorous used for derivative products. New technology
11 has resulted in a reduction in the overall demand for elemental
12 phosphorous. As this trend continues, less efficient phosphorous
13 producers will be forced to cease operations.

14 While overall global demand for elemental phosphorous is flat at best,
15 the portion sold to the derivative products market is growing
16 modestly. This includes Monsanto's phosphorous trichloride, used to
17 manufacture glyphosate.

18 **Q:** **PLEASE DESCRIBE HOW FOREIGN SUPPLIERS HAVE AND ARE**
19 **EXPECTED TO IMPACT THE PHOSPHOROUS MARKET IN THE**
20 **FUTURE.**

21 **A:** Historically, U.S. demand for phosphorous was supplied by U.S. sources
22 with some imports from Europe. Today, U.S. demand is met either by

1 Monsanto or by the Chinese. A small quantity is imported from the
2 remaining European producer. Because of their cost position, the Chinese
3 offer phosphorous delivered to the U.S. for between \$0.50 - \$0.70 per pound.
4 U.S. pricing has historically been \$0.90 - \$1.00 per pound. Pricing from
5 Europe is about \$0.70 per pound. At these price levels the Chinese will
6 continue to gain market share in the U.S and elsewhere. Given the substantial
7 excess capacity that exists in China, along with the large number of
8 producers, and the reduction in the cost of electricity anticipated with the
9 completion of the Three Gorges Dam project, pricing of elemental
10 phosphorous is not expected to increase for at least 5 years.

11 **Q: HOW IS PHOSPHOROUS FROM THE SODA SPRINGS PLANT**
12 **USED BY MONSANTO?**

13 **A:** The Soda Springs Plant ships phosphorus to Monsanto plants in Luling,
14 Louisiana and Camacari, Brazil. There we convert the phosphorous to
15 phosphorus trichloride, a raw materials required to produce glyphosate. The
16 resulting glyphosate intermediate is then shipped from each of these locations
17 to plants around the world where the final products are formulated for the
18 local agricultural markets.

19 **Q: IS PHOSPHORUS PRODUCED AT THE SODA SPRINGS PLANT**
20 **ALSO MARKETED TO OTHER END USERS?**

21 **A:** All phosphorus not used internally by Monsanto is sold on a long-term cost
22 based agreement to Astaris, a joint venture between FMC and Solutia.

1 Astaris has many uses for phosphorous, the most important being derivative
2 products for the food and industrial markets. There is no substitute for
3 elemental phosphorous in many of these products. Most of the remaining
4 phosphorous is used to produce phosphoric acid. The majority of Astaris'
5 phosphoric acid requirements are met by the low cost wet acid process. Soda
6 Springs phosphorous provides a supplement to this material. In addition,
7 Astaris sells a small portion of its phosphorous in the open market.

8 **Q: IS PHOSPHOROUS PRODUCED FROM THE SODA SPRINGS PLANT**
9 **UNIQUE OR DIFFERENT FROM PHOSPHOROUS PRODUCED FORM**
10 **OTHER SOURCES? IF SO, HOW DOES THE END USE OF ELEMENTAL**
11 **PHOSPHOROUS PRODUCED BY THE SODA SPRINGS PLANT DIFFER.**

12 **A:** The phosphorous produced at Soda Springs is of very high quality and is similar to
13 the phosphorous produced in Europe. Some of the phosphorous in China is of low
14 quality and is used locally for fertilizer. The majority of Chinese phosphorous is
15 functionally equivalent to the Soda Springs and European phosphorous, and
16 competes in the same markets.

17 The Soda Springs phosphorous plant is unique in the world. All other
18 plants have had to sell most of their output into markets where competition from
19 “wet acid” phosphoric acid has eroded their profitability. Eventually they shut
20 down one furnace causing costs to escalate which makes them even less
21 competitive. The death spiral continues until they are out of business. All

1 remaining phosphorous producers are faced with these conditions. The Chinese
2 will survive because of their cost position.

3 The business model for Soda Springs is unique and has been successful
4 for years. More important, it is sustainable. There are two components:

5 1) The foundation of the model is to have a state of the art plant that is cost effective
6 and operating near capacity 360 days a year. Soda Springs is the most technically
7 advanced, safest and environmentally responsible plant in the world. It is the only
8 plant which meets the highest standards of OSHA VPP Star, Bureau of Land
9 Management and ISO 9002. Though not the lowest cost phosphorous plant, Soda
10 Springs can compete given today's cost structure.

11 2) The vast majority of Soda Springs phosphorous goes to end markets
12 that cannot use "wet acid" as a replacement. Monsanto's internal use of the
13 phosphorous is for the growing glyphosate market. Astaris' share for
14 derivative products is growing modestly. The remainder is sold into the
15 phosphorous acid market. As Monsanto's requirements grow, phosphorous is
16 withdrawn from the acid market. This allows Soda Springs to operate at
17 capacity and achieve lowest manufacturing cost.

18 **Q: PLEASE DESCRIBE WHY PHOSPHOROUS PRODUCED AT THE**
19 **SODA SPRINGS PLANT MUST REMAIN COMPETITIVE WITH**
20 **OTHER SOURCES.**

21 **A:** The majority of the phosphorous from Soda Springs is used by Monsanto to
22 produce phosphorous trichloride and then glyphosate. This market has grown at

1 double-digit rates for twenty years. Monsanto fueled this growth by reducing
2 the selling price for Roundup herbicide. In the last ten years, we have reduced
3 the price globally by over 60%. We have maintained our profitability from the
4 growth in volume this generated.

5 Going forward, the market is changing. Glyphosate global growth is
6 under 10 percent annually and profit margins have narrowed. Price reductions
7 no longer can be offset by volume growth. Monsanto and outside analysts
8 forecast glyphosate profits to fall in 2002, and each year in the future, as new
9 competitors continue to enter the market.

10 Monsanto has planned for this eventuality and is focusing on the seed
11 business for future growth in profits. Still, glyphosate is a critical element of
12 Monsanto's product portfolio offered to farmers. To be successful in the future,
13 we will run the business to achieve the lowest possible cost. We have globally
14 sourced raw materials to reduce cost. We have implemented new technologies
15 to reduce cost. We have constructed new plants in other world areas to reduce
16 cost. We have outsourced to reduce cost. We have consolidated business and
17 changed suppliers to reduce cost. We are analyzing every element of Soda
18 Springs cost to effect reductions while still maintaining our high standards of
19 manufacturing operations.

20 Today, Monsanto can buy phosphorous from China and Europe at very
21 competitive prices. We have used and approved this alternate phosphorous for
22 our glyphosate production. We can deliver the phosphorous to our down stream

1 locations in Louisiana and Brazil at lower cost than from our own production at
2 Soda Springs. Ultimately, if Soda Springs cannot remain competitive,
3 Monsanto will have no alternative but to purchase phosphorous from others.
4 The productivity of our people continues to improve. The quality of our mining
5 operation continues to improve, and our capital investments help maintain our
6 cost position. Only electricity is outside of Monsanto's control in this equation,
7 and it is a huge portion of our total cost. Given continued low cost power, the
8 Soda Springs plant can remain a competitive source of phosphorous for
9 Monsanto and Astaris.

10 **Q: WHAT ALTERNATIVES DOES MONSANTO HAVE AVAILABLE**
11 **TO MEET ITS NEEDS IF PHOSPHOROUS FROM THE SODA**
12 **SPRINGS IS NO LONGER PRICED COMPETITIVE?**

13 **A.** Monsanto has relationships with other phosphorous suppliers who have committed
14 to meet our requirements, should the need arise. We have tested and approved this
15 material. Pricing is attractive. Given the global overcapacity that exists today,
16 there would be no problem securing the needed volume for our glyphosate use.

17 **(3) IMPORTANCE OF SPECIAL CONTRACTS**

18 **Q: WHY IS IT IMPORTANT FOR MONSANTO TO RECEIVE ITS POWER**
19 **SUPPLY UNDER THE TERMS OF A SPECIAL CONTRACT?**

20 **A:** A Special Contract establishing a known price for a set term is most important to
21 meet Monsanto's critical needs of price certainty, price stability and reduced risk. It

1 is also the best way to address the unique attributes of Monsanto's load as well as
2 technical and safety issues.

3 **Q: WHY IS PRICE CERTAINTY AND STABILITY SO IMPORTANT TO**
4 **MONSANTO'S DECISION-MAKING PROCESS?**

5 A: Soda Springs is a capital intensive facility. Unlike the vogue new companies
6 engaged in telecommunication services and dot.com projects, phosphorus
7 production requires long-term planning and millions of dollars of capital
8 investment. These investments must be made as much as ten years in advance of
9 their value creation. Also, because ours is a highly skilled (and highly paid)
10 workforce, it takes years of training and development to maximize the value of our
11 people.

12 Monsanto is nearing a crossroad with Soda Springs. Huge new
13 investments need to be made to develop the ore deposits for the future and install
14 the next generation of environmental equipment to insure compliance with ever
15 more stringent environmental regulations. To justify these investments and the
16 hiring and training of new employees, Monsanto must be able to assure its
17 stockholders that Soda Springs can remain in a competitive cost position. We must
18 have long-term, reliable, low cost electricity and we cannot live with dramatic
19 fluctuations in our power cost. We cannot have the uncertainty of being profitable
20 only when our power is cheap, while operating at a loss when PacifiCorp raises
21 our electricity price. These are not the economics that justify new capital
22 investments. Also, unlike aluminum smelters, irrigators and others, we cannot

1 shut down for a year and reap the value of selling our electricity. We need to run
2 24/7 year in, year out.

3 For fifty years Monsanto has operated Soda Springs successfully,
4 responsibly and reliably. Others have cut corners, lacked safety awareness, skirted
5 environmental issues and today they are gone. We have delivered value to our
6 customers, our shareholders, to our employees, and to Idaho. We can continue this
7 tradition if we can successfully manage our power cost.

8 **Q: WOULD MONSANTO PREFER A NEW CONTRACT WITHOUT**
9 **ECONOMIC INTERRUPTIONS LIKE THE EXISTING 1995 CONTRACT?**

10 A: Yes. Monsanto would much prefer no interruptions, if the price would be at or
11 near the current contract rate. Excepting periods of emergency interruption (as
12 provided for in the contract), this would enable Soda Springs to operate at full
13 capacity, which provides greatest production and lowest operating cost.

14 **Q: GOING FORWARD, IS MONSANTO WILLING TO ACCEPT A**
15 **LEVEL OF INTERRUPTION AS IT DID PRIOR TO THE 1995**
16 **CONTRACT?**

17 A: Yes. Monsanto is willing to take some interruptions to achieve a stable low
18 price for electricity. However, any interruption results in lower volumes of
19 phosphorus produced, and major interruptions can cause damage to the plant.
20 Therefore, the quantity, size and duration of interruptions need to be clearly
21 defined and agreed upon in advance.

1 **Q: EXPLAIN WHAT PLANNING DECISIONS MUST BE MADE ON A**
2 **LONG-TERM BASIS.**

3 A: All major capital expenditures, such as those made for plant improvements,
4 emission control and other equipment, resource acquisitions and mining
5 plans, require long-term planning and decision making.

6 **Q: PLEASE IDENTIFY WHAT SPECIAL CONTRACT TERMS EXIST**
7 **THAT MONSANTO AND PACIFICORP HAVE BEEN UNABLE TO**
8 **REACH AGREEMENT ON WHICH MONSANTO REQUESTS THE**
9 **COMMISSION DETERMINE.**

10 A: There are four primary areas of disagreement: (1) Single contract: We have been
11 unable to reach an agreement that Monsanto receive electric service under a single
12 integrated contract which provides for firm and interruptible service. PacifiCorp
13 insists upon a contract pricing Monsanto as a firm customer tied to tariff rates along
14 with separate short-term agreements entered into from time to time to provide for
15 curtailments. (2) Price: We have been unable to reach an agreement regarding the
16 price for electric service to Monsanto. Monsanto desires a single integrated price
17 for firm and interruptible service that is certain for the term of the special contract.
18 PacifiCorp insists upon tariff based rates priced as if Monsanto were a firm
19 customer. No consideration would be provided for economic curtailment, which
20 would be dealt with by way of separately negotiated short term contracts. (3)
21 Term: Monsanto needs a long-term contract preferably not less than five years.
22 PacifiCorp has proposed a one or two year contract for firm power and even shorter

1 monthly agreements for interruptible power. (4) Curtailment: As one of the factors
2 to arrive at a single electricity price, Monsanto has offered certain amounts of
3 curtailment available at any time over the entire contract term to provide greatest
4 flexibility/benefit to PacifiCorp. PacifiCorp wants to buy curtailment only if and
5 when it is needed via contracts running weeks or a few months, and without
6 Commission approval or oversight.

7 **(4) PROPOSED SPECIAL CONTRACT**

8 **Q: WHAT DOES MONSANTO RECOMMEND THE COMMISSION ADOPT**
9 **AS A NEW SPECIAL CONTRACT?**

10 **A:** Monsanto respectfully recommends the Commission require that PacifiCorp
11 continue to supply electric service to Monsanto pursuant to a single
12 integrated contract providing both firm and interruptible energy. Monsanto
13 recommends that the term commence on the date the U.S. District Court
14 determines the existing 1995 Contract terminates, and continue for a term of
15 not less than five years. Monsanto recommends the Commission retain
16 Monsanto's existing price of \$18.50 per MWH by adding an amendment to
17 permit additional economic interruptions and operating reserve interruptions
18 of up to 800 hours. This is in addition to the emergency interruptions already
19 provided in the contract. The specifics are shown in the attached Exhibit "A".

20 **Q: CAN YOU READILY INCORPORATE THESE CHANGES IN THE**
21 **EXISTING CONTRACT?**

1 A: Yes. The existing contract has served both parties well, and can be updated
2 with minimal changes. Technical, safety and other standard provisions in our
3 existing contract need not be changed. These provisions are the produce of
4 our long relationship, our prior negotiations, and our previous contracts.

5 **Q: HAVE YOU UPDATED THE EXISTING 1995 CONTRACT TO**
6 **INCLUDE MONSANTO’S PROPOSED NEW TERMS?**

7 A: Yes. Exhibit 210 is Monsanto’s proposed new Electric Service Agreement
8 with PacifiCorp in “redlined” version reflecting the changes. Exhibit 211 is a
9 clean copy.

10 **Q: PLEASE DESCRIBE THE CHANGES REFLECTED IN THE**
11 **PROPOSED NEW AGREEMENT, EXHIBITS 210 AND 211.**

12 A: On page 1, the dates have been changed to reflect the new term, which would
13 begin when the 1995 Contract ends, and continue for a period of five years.
14 The term set forth in paragraph 2.1 has been similarly changed. You will
15 note the second sentence is newly added to clarify the automatic renewal and
16 termination notice to avoid any potential future disputes, similar to which
17 arose over the termination date of the existing Contract that is being litigated
18 in Federal Court. A sentence has been added to paragraph 3.1 to add the
19 proposed new terms for up to 800 hours of economic and operating reserves
20 curtailments (in addition to existing emergency curtailment) which are set
21 forth and incorporated in the attached Exhibit “A”. Section 4 has been
22 revised to eliminate the previous paragraph 4.1.2 which dealt with the one-

1 time \$30,000,000 payment under the old Contract. The few other changes
2 are primarily minor updates which are non-substantive or for clarification
3 purposes. There are other changes that Monsanto would prefer to add, but
4 we have declined to do so in order to change only what is absolutely
5 necessary. In sum, the proposed new Contract is identical to the old Contract,
6 except for the new term and new curtailment provisions.

7 **Q: PLEASE DESCRIBE WHAT EFFECT THE CONTRACTS**
8 **PROPOSED BY MONSANTO WOULD HAVE ON THE**
9 **CONTINUED VIABILITY AND OPERATION OF THE SODA**
10 **SPRINGS PLANT.**

11 **A:** We believe Monsanto's contract proposal is fair and equitable to both
12 parties. We are willing to provide specific quantities of curtailment that
13 PacifiCorp can use to manage peak load and meet operating reserves
14 requirements. We are also willing to provide this curtailment as fast as any
15 option on their entire system, thus providing maximum operating
16 efficiencies to PacifiCorp and reliability to their customers. Alternatively,
17 we are willing to accept a modest price increase if interruptions remain at
18 current levels for emergency purposes. Lastly, we are willing to accept a
19 five-year term contract, shorter than has been the precedence in many past
20 contracts.

21 **Q: DOES THE NEW CURTAILMENT PROVISION PROPOSED BY**
22 **MONSANTO CAUSE YOU CONCERNS?**

1 A: Yes. The new curtailment provision contained in Monsanto's proposed
2 contract adds considerable cost and risk for Soda Springs. Our challenge
3 will be to find ways offsetting them. But, this is a contract we can live with,
4 and it provides the price stability and certainty we need to invest in the
5 future of our Soda Springs plant.

6 **Q: PLEASE DESCRIBE WHAT EFFECT THE PROPOSED**
7 **CONTRACTS PROPOSED BY PACIFICORP WOULD HAVE ON**
8 **THE CONTINUED VIABILITY AND OPERATION OF THE SODA**
9 **SPRINGS PLANT.**

10 A: The contract proposed by PacifiCorp is totally unacceptable to Monsanto. As I
11 have stated previously in this testimony, Monsanto must have reliable, predictable,
12 low cost power for Soda Springs to remain viable. Monsanto intends to continue
13 to invest in Soda Springs to upgrade the facility and reduce cost. To justify this
14 investment, Monsanto needs affordability and stability in electricity cost.
15 PacifiCorp's proposal provides neither. Their pricing is grossly higher than we
16 can accept. Their short-term buy back of curtailments will result in a net price
17 that not only is unknown, but subject to never ending fluctuations. Stated another
18 way, there is no way for Monsanto to predict future pricing because of
19 PacifiCorp's tariff structure and unwillingness to continue the traditional
20 approach to valuing our interruptibility. Under their proposal the cost of
21 electricity could fluctuate wildly from year to year. Monsanto cannot operate
22 Soda Springs with this uncertainty and variability.

1 **Q: DOES THIS CONCLUDE YOUR TESTIMONY?**

2 A: Yes.

3