**BEFORE THE**

**PUBLIC UTILITIES COMMISSION**

**OF THE STATE OF IDAHO**

| | |
|---|---|
| IN THE MATTER OF THE APPLICATION OF ROCKY MOUNTAIN POWER FOR APPROVAL OF CHANGES TO ITS ELECTRIC SERVICE SCHEDULES | **Case No. PAC-E-07-05**<br><br>**TESTIMONY OF DANIEL R. SCHETTLER** |

Direct Testimony of

**DANIEL R. SCHETTLER**

On Behalf of

**Monsanto Company**

September 28, 2007

**ROCKY MOUNTAIN POWER**

**Before the**
**Public Utilities Commission**
**Of the State of Idaho**

**CASE NO. PAC-E-07-05**

**Table of Contents to the**
**Direct Testimony of Daniel R. Schettler**

## I. INTRODUCTION

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

A Daniel R. Schettler, Monsanto Company, 800 N. Lindburgh Boulevard, St. Louis, Missouri 63167.

**Q WHAT IS YOUR CURRENT POSITION WITH MONSANTO COMPANY AND WHAT DO YOUR RESPONSIBILITIES INCLUDE?**

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

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

A I have a degree in economics from Drury University, with graduate work in finance at Washington University. I have been employed by Monsanto for 40 years and I have worked in virtually every business sector in the company. I have been responsible for agriculture procurement since 1986, and was named Vice President of Procurement in 2000.

## II. PURPOSE OF TESTIMONY

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

A The purpose of my testimony is to: (1) describe the worldwide phosphorus market; (2) discuss market changes and competitiveness resulting from new technology and foreign supplies; (3) describe how phosphorus from the Soda Springs plant is used and marketed; (4) describe why the Soda Springs plant must

remain competitive and viable; (5) describe how electricity curtailments impact our business; (6) provide the perspective of management in allocating capital; and (7) provide comments on the proposed rate increase.

## III. PHOSPHORUS MARKET AND COMPETITIVENESS

**Q PLEASE DESCRIBE THE PHOSPHORUS MARKET IN THE U.S. AND WORLDWIDE.**

A The global phosphorus market has experienced dramatic change in the last 15 years. What began as an industry concentrated in the United States and Europe for most of the 20th century has been transformed rapidly into one dominated by the Chinese. In 1990 the global elemental phosphorus market was 3.5 billion pounds, 85% of which was produced in Europe and North America. By 2001 the market had shrunk to 1.6 billion pounds, 75% produced in China. Global demand is still falling and the Chinese have shut down many small phosphorus furnaces. These have been replaced with new large efficient furnaces boosting global capacity to over 3.0 billion pounds in 2006. As a result, Chinese producers are today operating at a little over 40% of capacity. Outside of China, there are only two significant phosphorus plants, one in the Netherlands and Monsanto's plant in Soda Springs, Idaho. When I last presented testimony to the Idaho PUC in 2002, Monsanto's plant was the largest in the world. There wasn't a Chinese producer with even 25% of our capacity. Today, there are 5 Chinese plants larger than our Soda Springs plant.

There are two primary reasons for this change – technology and the price of electricity.

(1) New technology, referred to as the wet acid process, has provided industry with the phosphorus molecule at a significantly lower cost than the cost of elemental phosphorus. This has led to the dramatic drop in global demand for elemental phosphorus.

(2) High priced electricity led to the demise of U.S. and European elemental phosphorus plants. The new plants in China have low cost power and many even generate their own power in hydro electric plants.

Electricity represents 30% - 45% of the cost of producing elemental phosphorus. For Monsanto, electricity is the largest single cost factor, and the only significant cost outside of our control.

**Q PLEASE DESCRIBE HOW CHANGES IN TECHNOLOGY HAVE AFFECTED THE PHOSPHORUS MARKET AND THE IMPACTS EXPECTED IN THE FUTURE FROM NEW TECHNOLOGY.**

A On a global basis, 75% of elemental phosphorus is used to make thermal phosphoric acid. The remaining 25% is used to produce derivative products, the largest being phosphorus trichloride, one of the raw materials Monsanto uses to manufacture glyphosate herbicide. The wet acid process is an alternate, lower cost route to phosphoric acid. Its use has grown dramatically and will continue to grow in the future. The wet acid process is not suitable as a replacement for the 25% of elemental phosphorus used for derivative products. New technology has resulted in a reduction in the overall demand for elemental phosphorus. As this trend continues, less efficient phosphorus producers will be forced to cease operations.

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

**Q PLEASE DESCRIBE HOW FOREIGN SUPPLIERS HAVE AND ARE EXPECTED TO IMPACT THE PHOSPHORUS MARKET IN THE FUTURE.**

A Historically, U.S. demand for phosphorus was supplied by U.S. sources with some imports from Europe. Today, U.S. demand is met either by Monsanto or by the Chinese. Because of their cost position, the Chinese sell phosphorus delivered to the U.S. at very low prices, often below Monsanto's manufacturing cost at Soda Springs. The Chinese will continue to gain market share in the U.S. and elsewhere. Given the substantial excess capacity that exists in China, along with the large number of producers, pricing of elemental phosphorus is not expected to increase dramatically in the future.

**Q WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF THE SODA SPRINGS PLANT COMPARED WITH OTHER SUPPLIERS?**

A Soda Springs is the most technically advanced, safest and environmentally responsible plant in the world. It has the advantage of being a more reliable source.. It has a highly motivated and competent work force. Soda Springs operates efficiently and has higher safety and environmental standards than any phosphorus plant in the world. All of this comes at higher operating costs than our Chinese competition. Monsanto has its own mine leases which provide phosphorus ore. We have many different approved sources for our coal and coke

requirements and competitively bid this business to maintain the lowest possible cost. Electricity is the only input over which we have no control. Unfortunately it is our largest cost factor.

## IV. SODA SPRINGS PHOSPHORUS PRODUCTION AND USE

**Q HOW IS PHOSPHORUS FROM THE SODA SPRINGS PLANT USED BY MONSANTO?**

A The Soda Springs plant ships phosphorus to Monsanto plants in Luling, Louisiana and Camacari, Brazil. There we convert the phosphorus to phosphorus trichloride, a raw material required to produce glyphosate. The resulting glyphosate intermediate is then shipped from each of these locations to plants around the world where the final products are formulated for the local agricultural markets.

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

A Phosphorous not used internally by Monsanto is sold on a long-term cost based agreement to ICL Industries who in 2005 purchased Astaris, (the joint venture between FMC and Solutia) This phosphorus is used in the U.S. for a variety of derivative products for the food and industrial markets. A small quantity of phosphorus is sold to Thermphos International who purchased Solutia's Dequest business in May, 2007.

**Q IS PHOSPHORUS PRODUCED FROM THE SODA SPRINGS PLANT UNIQUE OR DIFFERENT FROM PHOSPHORUS PRODUCED FROM**

**OTHER SOURCES? IF SO, HOW DOES THE END USE OF ELEMENTAL PHOSPHORUS PRODUCED BY THE SODA SPRINGS PLANT DIFFER?**

A The phosphorus produced at Soda Springs is of very high quality and is similar to the phosphorus produced in Europe. Much of the phosphorus in China is of low quality and is used locally for fertilizer. However, all new capacity in China is high quality and functionally equivalent to the Soda Springs and European phosphorus, and competes in the same markets.

The Soda Springs phosphorus plant is unique in the world. All other plants have had to sell most of their output into markets where competition from "wet acid" phosphoric acid has eroded their profitability. Eventually they shut down one furnace, causing costs to escalate which makes them even less competitive. The death spiral continues until they are out of business. All remaining phosphorus producers are faced with these conditions. The Chinese will survive because of their cost position.

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

1) The foundation of the model is a state of the art plant that is cost effective and operating at capacity 365 days a year. Soda Springs is the most technically advanced, safest and environmentally responsible plant in the world. It is the only plant which meets the highest standards of OSHA VPP Star, Bureau of Land Management and ISO 9002. Though not the lowest cost phosphorus plant, Soda Springs can compete given today's cost structure.

2) The vast majority of Soda Springs phosphorus goes to end markets that cannot use "wet acid" as a replacement. Monsanto's internal use of the phosphorus is for the growing glyphosate market. ICL's share for derivative products is growing modestly. As Monsanto's requirements grow, phosphorus is withdrawn from other customers. This allows Soda Springs to operate at capacity and achieve the lowest manufacturing cost.

**Q FROM MANAGEMENT'S PERSPECTIVE WHY MUST PHOSPHORUS PRODUCED AT THE SODA SPRINGS PLANT REMAIN COMPETITIVE WITH OTHER SOURCES.**

A The vast majority of phosphorus from Soda Springs is used by Monsanto to produce phosphorus trichloride, the raw material used to produce glyphosate sold by Monsanto as Roundup®. This market grew at double-digit rates for twenty years. Monsanto fueled this growth by reducing the selling price for Roundup® herbicide. In the ten years from 1993 to 2002 we reduced the price of glyphosate globally by over 60%. This made the herbicide affordable for many new applications and Monsanto maintained profitability from the resulting growth in volume. By 2000 market growth had stalled as the market became saturated. Our glyphosate profits have fallen steadily ever since.

During this same time period the Chinese actively entered the glyphosate business building over 70 small plants around their country. Today 6-8 major producers have emerged and the Chinese have captured 30% of the global glyphosate market.

Monsanto has planned for the reduction in glyphosate profits and is focusing on seed business for future growth in profits. Still, glyphosate is a critical element of Monsanto's product portfolio offered to farmers. To be successful in the future, we will run the business to achieve the lowest possible cost. We have globally sourced raw materials to reduce cost. We have implemented new technologies to reduce cost. We have constructed new plants in other world areas to reduce cost. We have outsourced to reduce cost. We have consolidated business and changed suppliers to reduce cost. We have purchased phosphorus and glyphosate from the Chinese. We are analyzing every element of Soda Springs cost to effect reductions while still maintaining the highest standards of manufacturing operations.

Today, Monsanto can buy phosphorus from China at competitive prices. We have used alternate phosphorus for our glyphosate production. We can deliver the phosphorus to our downstream locations in Louisiana and Brazil at lower cost than from our own production at Soda Springs. Ultimately, if Soda Springs cannot remain competitive, Monsanto will have no alternative but to purchase phosphorus from others. The productivity of our people continues to improve. The quality of our mining operation continues to improve, and our capital investments help maintain our cost position. Only electricity is outside of Monsanto's control in this equation, and it is a huge portion of our total cost. Given a stable and reasonably priced supply of electricity, the Soda Springs plant can remain a competitive source of phosphorus for Monsanto.

**Q WHAT ALTERNATIVES DOES MONSANTO HAVE AVAILABLE TO MEET ITS NEEDS IF PHOSPHORUS FROM THE SODA SPRINGS PLANT IS NO LONGER PRICE COMPETITIVE?**

A Monsanto has relationships with other phosphorus suppliers who have committed to meet our requirements, should the need arise. We have tested and approved this material. Pricing is attractive. Given the global overcapacity that exists today, Monsanto would be able to secure the volume needed for our glyphosate business. However, this alternative would reduce or eliminate the need for Monsanto to operate the Soda Springs plant.

**Q DOES THE ENTRANCE OF CHINESE PRODUCERS INTO THE GLYPHOSATE MARKET IMPACT THE LONG-TERM VIABILITY OF THE SODA SPRINGS PLANT?**

A As with phosphorus, the Chinese are selling glyphosate into the world market at low prices. In order to test quality and supplier capabilities, Monsanto buys and uses Chinese glyphosate for some of our operations in South America. The quality is satisfactory and functionally equivalent to Monsanto's glyphosate. Monsanto's advantage is years of operating experience, cutting edge technology and scale. Our huge production capability allows Monsanto to enjoy a favorable glyphosate cost position relative to all Chinese producers. But, if Monsanto's cost advantage is lost, we will be forced to source large quantities of glyphosate from China, negatively impacting the operations of the Soda Springs plant. Electricity is the only significant input we are forced to buy without the advantage of the competitive bid process, and the largest threat to our cost position.

## V. ELECTRICITY CURTAILMENTS EFFECTS

**Q HOW DO THE ELECTRICTY CURTAILMENTS IN THE CURRENT CONTRACT IMPACT THE BUSINESS?**

A Every curtailment negatively impacts our business operations, with the exception of net electricity price benefits. Curtailments increase costs and reduce production, operational efficiencies and reliability. Because the curtailments must be taken on little or no notice, and are difficult to predict from day to day or month to month, it is often impossible to avoid inefficiencies and the associated production losses. The Soda Springs plant operates 24 hours a day, 365 days a year. To be viable today and into the future, we must operate all three of our furnaces at maximum capacity. Lost production can never be made up. Supply short falls must be purchased from other sources. Operating costs are spread across fewer pounds of produced phosphorus, thus increasing our per pound cost of phosphorus from the plant.

**Q IS MONSANTO ABLE TO ABSORB MORE INTERRUPTIONS IN ORDER TO ACHIEVE A LOWER NET PRICE?**

A No. The 1000 hours of interruptions under the current contract are the most Monsanto could tolerate, given the current customer demand and supply mix. Any greater interruptions would not only disrupt plant operations but also raise the per-pound cost of phosphorus to unacceptable levels. Our preference would be to reduce the hours of interruptions, particularly if we cannot achieve proper value for extra hours.

## VI. CAPITAL COMMITTMENTS

**Q EXPLAIN HOW MANAGEMENT ALLOCATES CAPITAL TO OPERATING BUSINESS SEGMENTS.**

A Monsanto develops its long-term capital plan based on the return that will be generated by the various projects. We always have more projects than cash available, so we prioritize the alternatives. Of first priority are environmental, safety and compliance projects. Next, we look at all projects that generate a return higher than our weighted average cost of capital (11-12%). High return projects get funded, while low return projects usually do not.

**Q EXPLAIN SOME OF THE RECENT AND FUTURE MAJOR CAPITAL COSTS NECESSARY TO OPERATE THE SODA SPRINGS PLANT AND MINING OPERATIONS.**

A Major capital expenditures consist of plant improvements, environmental, resource acquisitions and mining plans. Since 2005 Monsanto has invested over $30 million in capital projects at Soda Springs for exploration and new mine development, heavy equipment, furnace upgrades, process improvement, environmental compliance and cost improvement projects. Our capital plan for 2008 through 2010 requests corporate funding of an additional $30 million for the Soda Springs plant. The benefits of these projects often are not felt for 5 or more years. In the case of mining exploration, these projects may not bring value to Monsanto for over 10 years.

**Q EXPLAIN WHY PRICE CERTAINTY AND STABILITY IS IMPORTANT TO MONSANTO'S DECISION-MAKING PROCESS.**

A Monsanto is not a monopoly nor does it get a guaranteed rate of return on investments. The Soda Springs plant is a capital-intensive facility. Phosphorus production requires long-term planning and millions of dollars of capital investment. These investments must be made as much as 10 years in advance of their value creation. Also, because most of our work force is highly skilled and well paid, it takes years of training and development to maximize the value of our people.

New investments are needed to develop ore deposits for the future and install the next generation of environmental equipment to ensure compliance with ever-more stringent environmental regulations, a cost our Chinese competitors do not have. To justify these investments, Monsanto must be able to have reasonable assurance that Soda Springs can remain in a competitive cost position.

## VII. COMMENTS ON THE PROPOSED RATE INCREASE

**Q GIVEN THE FACT THAT MONSANTO'S FIRM RATES JUST INCREASED 16.5% EFFECTIVE JANUARY 1, 2007, ARE YOU SHOCKED TO LEARN THAT PACIFICORP IS REQUESTING AN EVEN LARGER 24.1% INCREASE IN FIRM LESS THAN A YEAR LATER?**

A As a part of the negotiations which resulted in the 2007 Contract, Monsanto agreed to a $6.8 million increase, a substantial 16.5% increase in the rate previously paid. Because the rate increase was the result of negotiation and compromise, we believed PacifiCorp was in agreement that Monsanto would now be shouldering a fair, just and reasonable share of PacifiCorp's operating costs. While we were aware under the terms of the new Contract that rate stability was

only guaranteed for one year and that PacifiCorp could file a new general rate case changing our new tariff-based rates after January 1, 2008, I was surprised and shocked to learn of PacifiCorp's proposal to increase our rates by 32.9% just one year later. While PacifiCorp's filing claimed Monsanto's increase would be 24.1%, our calculations indicate our net rates, after the credit for the 1,000 hours of interruptions, would increase from $25.55 per MWH to $33.96 per MWH, or 32.9%. The so-called "natural hedge" we were promised, whereby firm rate increases would be substantially offset by increases in the interruptibility value, certainly would not be achieved under PacifiCorp's proposal. It seems clear to me now that PacifiCorp was willing to make any commitment necessary to get Monsanto's support for their merger and movement to tariff rates, all the time intending to pass along enormous increases as soon as they could implement a rate case in Idaho. It is particularly troublesome that PacifiCorp is requesting a disproportionate and substantially larger increase for Monsanto than for other customers. Had we known then that they were not negotiating in good faith, Monsanto would never have agreed to the current contract.

**Q DO YOU THINK MONSANTO'S PRICES ESTABLISHED JANUARY 1, 2007 UNDER THE CURRENT CONTRACT WERE NOT PAYING MONSANTO'S FAIR SHARE OF PACIFICORP'S COSTS?**

A No. We thought the prices that became effective January 1, 2007 were agreed to by both parties as fair, just and reasonable. Further, that any future price increases would be based on any increases in PacifiCorp's operating costs incurred after January 1, 2007.

**Q PLEASE DESCRIBE WHAT EFFECT THE PROPOSED 32.9% INCREASE IN MONSANTO'S NET PRICE WOULD HAVE ON THE CONTINUED VIABILITY AND OPERATION OF THE SODA SPRINGS PLANT.**

A The proposed increase is totally unacceptable to Monsanto. As I previously testified, Monsanto must have reliable, predictable and affordable power for Soda Springs to remain viable. Monsanto fully intends to continue to invest in Soda Springs as an important long-term and reliable source of phosphorus, provided we have a reasonable expectation the supply will be reliable and price competitive in both the short and long term. PacifiCorp's proposed firm rate increase of 24.1%, and overall net rate increase of 32.9%, on the back of a 16.5% increase on January 1, 2007 certainly does not meet the test of providing fair, just and reasonable rates.

**Q JIM SMITH EXPLAINED IN HIS TESTIMONY, PAGES 17-18 WHY MONSANTO AGREED TO MOVE FROM CONTRACT TO TARIFF BASED RATES. DO YOU NOW HAVE CONCERNS ABOUT HAVING RATES PERIODICALLY CHANGED IN GENERAL RATE CASE PROCEEDINGS?**

A Yes. Judging by what we have seen so far, I am very concerned that Monsanto will now be subjected to frequent and substantial price changes over which we will have little or no control. I have serious questions now that we have received the benefit of our bargain. I am hopeful the Commission will appropriately value

the 1000 hours of curtailment we have given up to substantially offset any increase in our firm rates.

**Q DOES THIS CONCLUDE YOUR TESTIMONY?**

**A** Yes.