The Fertilizer Institute

Nourish, Replenish, Grow

Testimony of

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of

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Intrepid Potash

on behalf of

The Fertilizer Institute

Before the

House Subcommittee on Energy and Mineral Resources

Regarding

H.R. 4984, the Potash Royalty Reduction Act of 2004

DESCRIPTION OF TESTIMONY

A description of The Intrepid Companies, outline of U.S. potash fertilizer production and overview of the importance and necessity of fertilizer use for world food production.

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Introduction

Mr. Chairman and members of the subcommittee, I am Robert P. Jornayvaz III of Intrepid Mining LLC, headquartered in Denver, Colo. Intrepid is the largest producer of potash in the United States, which it produces from two facilities in Utah and two in New Mexico. Intrepid currently employs approximately 600 individuals in the potash industry. On behalf of The Intrepid Companies and The Fertilizer Institute (TFI), of which my company is a member, I would like to submit this written testimony for the hearing record.

On behalf of The Intrepid Companies and TFI, I appreciate the opportunity to testify before the Subcommittee on Energy and Mineral Resources in support of H.R. 4984, the "Potash Royalty Reduction Act of 2004." Furthermore, I would like to thank Congressman Steve Pearce for his leadership and for recently introducing H.R. 4984, which we strongly support. We urge swift congressional passage of this timely legislation.

What is Potash?

Potassium (K), commonly called potash, is a critically important commercial fertilizer because it is essential for plant and human growth. Potassium is found in extinct lakes, seas and oceans. When these water bodies evaporated over the ages, potassium deposits were left behind. After thousands of years of earthquakes, volcanoes and glaciers, these deposits were covered with rock, earth and soil. Some deposits are just below the surface, while others can be covered by several thousand feet of earth. As such, potassium is a mineral mined from the ground and used to manufacture potash fertilizers. Food producers, here in the United States and around the world--recycle potassium by applying potash fertilizers to farm fields.

Potassium is necessary for photosynthesis in plant growth, which is the process by which green plants produce, transport and accumulate sugars. Potassium acts as a regulator within plants by helping keep the more than 60 different plant enzyme systems working, by seeing that sugars are distributed and used properly and that water is used efficiently in the plant. Potash makes plants hardy, helps them to withstand the stress of drought and helps plants and humans fight off disease. Potassium also protects plants from cold winter temperatures and helps them to resist invasions by pests such as weeds and insects. Healthy plants not only help create an abundant and stable food supply, but they also increase our oxygen supply by taking in carbon dioxide and releasing oxygen during photosynthesis and provide sound and heat insulation for the earth.

For example, a typical corn crop will take up more than 200 pounds of potassium on an acre in one year. That amounts to about 16 billion pounds of K taken up by corn in the United States—and that's just this country's corn crop. Consider other important crops such as apples, oranges, carrots, bananas, and cotton—basically all the food and fiber crops we eat and use, produced all around the world--need sufficient supplies of potassium.

These potassium nutrients are then passed on to humans in meats, milk and dairy products, fruits, nuts and vegetables. Potassium is the third most abundant mineral in the human body. Nearly 90 percent of a person's body potassium is found in major organs and tissues, including muscles, skin and digestive tract. There would be no proteins without potassium and the human heart could not beat without it. In short, commercial fertilizers, such as potash, feed the soil that feeds

the world.

Where Does Potash Come From?

More than 85 percent of the U.S. production of potash (potassium and potassium compounds) occurs near Carlsbad, N.M. The great bulk of this production occurs from the sylvite mineral form of potash on federal mineral leases subject to an existing 2 percent royalty rate.

According to the American Association of Plant Food Control Officials (AAPFCO), U.S. farmers and food producers used 5,010,000 tons of potash (K2O) in FY 2002/03 (June 2002-June 2003). According to the Potash and Phosphate Institute (PPI), from the remaining potash producing mines in the United States located in New Mexico and Utah, the United States produced 907,279 tons of potash fertilizer in FY 2002/03. According to the U.S. Department of Commerce, the U.S. imported 5,930,906 tons of potash and exported 300,373 tons during the same period.

Intrepid Mining LLC currently mines potash from federal lands in Utah and New Mexico. It currently pays federal royalties of approximately $2,108,000 annually. The proposed legislation would decrease that amount by approximately $1,050,000. Some or all of this decreased amount would then be used to fund a reclamation account to pay for the costs of reclamation down the road.

Due in part to foreign competition and high domestic energy costs, U.S. potash production has been under severe economic strains. In May 2003, one of the largest U.S. potash producers filed for protection under Chapter 11 of the U.S. Bankruptcy Code. In the Carlsbad potash basin there were seven operating mines in the early 1980s, but only two operating mines remain. Currently, about 1,000 individuals are employed in U.S. potash production as compared with the peak of more than 4,000-5,000 employees in the 1970s and 1980s. U.S. potash reserves are substantial and can continue to supply the substantial agricultural demand for fertilizer for many decades. However, if the remaining U.S. potash mines close prematurely, it is unlikely they would ever reopen. We agree that in order to keep this critical domestic industry viable and preserve jobs in the local Carlsbad economy, federal royalty relief, as directed in H.R. 4984, is urgently needed.

What is Fertilizer?

Fertilizer is simply food for plants. Just like the human body needs vitamins and minerals, plants need nutrients in order to grow. Also like humans and animals, plants need adequate water, sufficient food, and protection from diseases and pests for a healthy lifestyle. To grow and reproduce, plants need large amounts of three basic nutrients—nitrogen, phosphorous and potassium.

Nitrogen, for example, exists in every plant as a protein and is a component of its DNA and RNA, the genetic "blueprints" of life itself. Absorbed more than other nutrients, nitrogen makes plants green and is the catalyst for increasing yields. Phosphate helps plants use water efficiently, promotes root growth, and improves the quality of grains. As already stated potassium, commonly called potash, is important because it is necessary for photosynthesis, which is the production, transportation and accumulation of sugars in the plant.

Today's commercial fertilizer industry began with a revolutionary scientific discovery in the latter part of the 18th century, which found that chemical elements can play a direct role in plant nutrition. This initial concept opened the way for industrial scale manufacturing of fertilizers of

all types in the 19th century. Following World War II, new technologies allowed for the rapid expansion of fertilizer production. Coupled with growing food demand and the development of higher-yielding crop varieties, fertilizer helped fuel the Green Revolution.

Fertilizers Protect the Environment

The efficient use of fertilizer also helps to conserve our natural environment. With fertilizers and modern high-yield farming practices, more food is produced per acre each year so land may be conserved. Fertilizers used properly, work to maximize yields on farmland already in production, while helping to prevent the widespread loss of forests, rainforests and environmentally important habitat. Use of marginal land and habitat for "slash and burn" low-yield farming represents a major global environmental threat.

It is clear that modern high-yield farming--the Green Revolution--has been a significant environmental and humanitarian triumph. Since the 1960s it has led to better lives and prevented the malnourishment of billions of people. Additionally, the Green Revolution's higher yields made it unnecessary to clear off millions of acres for food production, thereby saving large amounts of natural habitat and biodiversity from the plow. In short, producing more food per acre helped save large areas of land for nature.

Conservation and biodiversity is similarly enhanced by high yield practices being applied to forestry. High-yield plantation forestry meets human demands for forest products with significantly fewer acres, allowing for far wider conservation of natural forests and the rich array of flora and fauna within those forests.

Consider these important facts:

- More than one-third of the Earth's total land area is already devoted to food and fiber production;
- The most productive and sustainable land is already being farmed;
- Worldwide per capita consumption of meat, dairy products, fruits and vegetables is increasing rapidly as living standards rise throughout the world. In China alone, meat consumption more than doubled in the 1990s;
- Global demand for forest products is increasing rapidly and may double over the next half century; and
- The greatest threat to the Earth's biodiversity is habitat loss through the conversion of natural ecosystems to agriculture.

Human welfare and the conservation and preservation of our planet's rich biological heritage depends on the continued manufacture, distribution and the agronomically sound application of fertilizers.

Fertilizers Improve our Way of Life

Fertilizers enhance many consumer products. For example, thanks to fertilizers, fruits and vegetables are available in affordable abundance year-round in every state of our nation. Nitrogen is used to make nitric acid, a major component in batteries, tires, lacquers and paints. Many soda drinks contain phosphoric acid, derived from phosphate, and many bath soaps and detergents contain potash.

Fertilizers are also at work in industry. Aside from their benefits to agriculture, fertilizer components are central to such industrial processes as semiconductor chip making, cattle feed production, metal finishing, the manufacture of detergents and resin, refrigerants, fiberglass insulation and even rocket fuel needed for our space, satellite and communications industries.

Fertilizers Feed the World

Finally, and most importantly, of all the functions fertilizers play in the world, fertilizers are critically necessary in order to feed our world's growing population. As our planet's population continues to climb toward an estimated 9 billion by the year 2050--a level 50 percent higher than year 2000 levels--experts estimate that food production must increase more than two percent annually just to maintain current diets. For example, Dr. Vaclav Smil, a distinguished professor at the University of Manitoba at Winnipeg and one of the world's foremost authorities on nitrogen and the environment, states in his book "*Enriching the Earth"* that commercial fertilizer nitrogen (N) accounts for approximately half of all N reaching global croplands today and supplies food needs for at least 40 percent of the world's population. Due to global population increase and the expansion of global prosperity and diet quality, it is estimated that at least 60 percent of humanity will eventually owe its nutritional survival to N fertilizer.

Fertilizers Contribute to the American Way of Life

The United States and many other developed nations are blessed with safe, abundant and affordable food. Thanks to fertilizers, the productivity of U.S. farmers and livestock producers and an efficient agribusiness processing, storage and transportation system--Americans spend less than 8 percent of their disposable income on food. This leaves 92 percent of Americans' disposable income for luxury items such as spacious homes, multiple automobiles, college tuition, travel, entertainment and a vast array of consumer products and activities that contribute to our way of life. Today, the abundance of food we enjoy is just one way fertilizers help enrich the world around us.

Conclusion

To conclude, allow me to again thank you for your leadership regarding the "Potash Royalty Reduction Act of 2004" and your strong support of America's important potash mining economy. I again relay our strong support for H.R. 4984, the "Potash Royalty Reduction Act 2004" and your efforts and those of the subcommittee in this regard. Thank you for the opportunity to testify today.

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The Fertilizer Institute *represents the nation's fertilizer industry. Producers, manufacturers, retailers, trading firms and equipment manufacturers which comprise its membership are served by a full-time Washington, D.C. staff in various legislative, education and technical areas, as well as with information and public relations programs.*