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JUN 06 2006

STATE OF ILLINOIS
Pollution Control Board

June 2, 2006

Dorothy Gunn
Clerk
Illinois Pollution Control Board
100 West Randolph
Suite 11-500
Chicago, IL 60601

PC# 6231

Re: R06-25, Proposed new 35 Ill. Adm. Cod 225 Control of Emissions from Large Combustion Sources (Mercury)

Dear Ms. Gunn,

As the state of Illinois considers steep reductions in mercury emissions from coal-fired power plants, KFX would like to make the Illinois Pollution Control Board aware of a cost-effective solution. KFX would also like to thank the Illinois Environmental Protection Agency (ILEPA) for recognizing the benefits of the K-Fuel™ coal beneficiation process in the "Technical Support Document for Reducing Mercury Emissions From Coal-Fired Electric Generating Units" (TSD).

KFX's commercial pre-combustion process upgrades high moisture low-rank subbituminous coals and lignites into a higher energy (BTU), lower moisture fuel, called K-Fuel™. The K-Fuel™ process utilizes pressure and heat to change the chemical and physical structure of the feedstock. For Powder River Basin (PRB) feedstocks, this process is designed to reduce moisture content from approximately 30% in the feedstock to 7-12% and increase Btu heat value from approximately 8,000-8,880BTU/lb to 10,500-11,500BTU/lb, making the K-Fuel™ product comparable to many eastern coals. A co-benefit of the pre-combustion process is a 70% average decrease in mercury, as the TSD recognized. By utilizing low sulfur western coals as feedstocks for the process, the K-Fuel™ product is a higher Btu fuel with lower SO₂ emissions. K-Fuel™ also reduces NO_x emissions and CO₂ emissions are approximately 10% less compared to eastern coal. K-Fuel™ is an enhancement of or alternative to combustion and post-combustion controls.

KFX supports Illinois' flexible approach in its proposed rule by measuring mercury reductions on either a percentage reduction or emission rate basis. Such an approach allows utilities to choose the most cost-effective reduction methods. Units that choose to comply with the output-based emission rate standard have the flexibility of reducing

emissions through pre-combustion, combustion, and /or post-combustion means to ensure that stack emissions requirements are met. However, KFx is concerned that units do not have the same flexibility in complying with the percentage removal calculation since it does not account for pre-combustion mercury removal methods, such as the K-Fuel™ process. The model rule states that the percentage mercury reduction is based on the input mercury defined as: “the mass of mercury that is contained in the coal combusted within an Electric Generating Unit”. KFx disagrees with this definition as it only allows combustion and post-combustion technologies to achieve the required percentage mercury reduction and does not recognize the significant amount of mercury that can be removed from the coal prior to combustion as a solution.

KFx requests that pre-combustion mercury removal technologies be considered in the model rule as equal to combustion and post-combustion mercury control technologies by revising compliance with the percentage reduction standard to be based on a reduction of baseline emissions. For example, the state of Minnesota recently passed a state mercury rule requiring plants to reduce emissions 90% according to baseline emissions that will be measured in 2007. Wisconsin’s percentage mercury reduction is based on 2002-2004 mercury emissions.

Information is attached to provide further details about the K-Fuel™ process and the benefits of K-Fuel™. Please do not hesitate to contact me with any questions or for additional information.

Thank you for consideration of these comments.

Sincerely,



Carrie Atiyeh
Environmental and Legislative Analyst

CC: Illinois Environmental Protection Agency



Who Is KFX Inc.

KFX Inc. was formed in 1984 as a clean coal company and has evolved into an energy-environment solutions organization. Our patented commercial process and technology, which we refer to as K-Fuel™, uses heat and pressure to physically and chemically transform low-cost, low-rank coal into an energy efficient lower-emission fuel. An important co-benefit of the K-Fuel™ process is the removal of significant amounts of impurities, including mercury, and can reduce emissions of sulfur dioxide (SO₂) and oxides of nitrogen (NO_x) when combusted. The K-Fuel™ beneficiation process improves all three aspects of coal usage:

- **Energy:** Increases the Btu's per pound by approximately 30-40% by reducing moisture on average 80%.
- **Environment:** Reduces mercury content on average 70% and can reduce SO₂ and NO_x emissions up to 30% as a co-benefit.
- **Economics:** Increases system efficiency and maintains or improves generating capacity. K-Fuel™ can be an enhancement of or alternative to post-combustion control systems.

This patented pre-combustion commercial process has been evolving for over 20 years with substantial private equity invested. We continue to advance the commercial solutions of K-Fuel™ through research and development, the operation of a demonstration facility and the construction of a commercial production plant, all near Gillette, Wyoming. A 750,000 ton per year K-Fuel™ facility is on schedule to begin production in the fourth quarter of 2005. We plan to develop and operate K-Fuel™ production plants domestically, either wholly owned or through joint ventures, and through international licensing to third parties.

KFX is committed to developing and implementing innovative solutions to meet our nation's and the world's energy needs while improving the environment.

The KFX Management Team:



Theodore (Ted) Venners
Chairman & CTO



Mark S. Sexton
Chief Executive Officer



Robert I. Hanfling
President & COO



Kevin R. Collins
Executive VP, Finance & Strategy



Jim Imbler
Sr VP, Business Development



William G. Laughlin
Sr VP, General Counsel, Secretary



What is K-Fuel™

K-Fuel™ is a proven, patented pre-combustion process that transforms low-cost, low-grade coal, such as subbituminous coal and lignite, into a clean, economical, efficient energy source. The U.S. has abundant reserves of low-grade coals that, when upgraded by reducing moisture and polluting impurities, provide a high-quality, solid fuel, called K-Fuel™. This commercial pre-combustion process creates a cleaner-burning beneficiated coal, essentially an "unleaded gasoline" equivalent for the coal-fired industry, helping facilities to comply with environmental standards while ensuring production efficiency. The K-Fuel™ beneficiation process improves all three aspects of coal usage:

- **Energy:** Increases the Btu's per pound by approximately 30-40% by reducing moisture on average 80%.
- **Environment:** Reduces mercury content on average 70% and can reduce SO₂ and NO_x emissions up to 30% as a co-benefit.
- **Economics:** Increases system efficiency and maintains or improves generating capacity. K-Fuel™ can be an enhancement of or alternative to post-combustion control systems.

The K-Fuel™ process is capable of upgrading nearly any coal, although some are more cost effective than others. Economics drive the use of low-grade feedstocks (such as subbituminous coal and lignite) because of the cost differential between the raw coal value and ultimate product value. K-Fuel™ is superior to raw subbituminous coal and lignite because of the quality and cost benefits that it offers the coal-fired industry.

K-Fuel™ Results

	Average Change from Sample to K-Fuel™	R ²
Btu/lb	+35%	96%
Moisture%	-79%	97%
Ash%	Variable	NA
Volatile%	+32%	90%
Sulfur (lb/MMBtu)	Variable	NA
Mercury (lb/TBtu)	-70%	92%

* Percentage change is average of 16 unique samples of primarily subbituminous feedstock and resulting K-Fuel™ autoclave product.

† R² is the measure of overall predictive ability of the model.

The K-Fuel™ pre-combustion process applies heat and pressure to reduce moisture from approximately 30% in the feedstock to 7-12% in the K-Fuel™. As a result, the heat value is boosted by 30-40%, from 8,000-8,800 Btu/lb in the feedstock to 10,500-11,500 Btu/lb in the K-Fuel™. Because the various subbituminous and lignite feedstocks for the K-Fuel™ process have a range of moisture content, heat value, and emissions upon combustion, so too the resulting K-Fuel™ will have a range of Btu, moisture, and chemical properties. However, the common features of all K-Fuel™ can be well defined within a limited range of parameters such as increased efficiency and significantly reduced emissions compared to the parent coal.



Emissions Benefits Achieved by K-Fuel™

The K-Fuel™ pre-combustion process has been optimized to reduce moisture content from approximately 30% in the feedstock to 7-12% in the K-Fuel™. As a result, the heat value is boosted by 30-40%, from 8,000-8,800 Btu/lb in the feedstock to 10,500-11,500 Btu/lb in the K-Fuel™. Emissions reductions are a co-benefit of the pre-combustion process. K-Fuel™ provides a pre-combustion mercury removal solution, reducing mercury content on average 70%. In addition, by burning K-Fuel™, facilities can reduce emissions of sulfur dioxide (SO₂) and nitrogen oxides (NO_x) up to 30%. Finally, it is estimated that carbon dioxide (CO₂) emissions will be reduced due to increased efficiency.

Because the various subbituminous and lignite feedstocks for the K-Fuel™ process have a range of moisture content, heat value, and emissions upon combustion, so too the resulting K-Fuel™ will have a range of Btu, moisture, and chemical properties. However, the common features of all K-Fuel™ can be well defined within a limited range of parameters such as increased efficiency and significantly reduced emissions compared to the parent coal.

We believe K-Fx has the only commercial pre-combustion solution and proven technology for low-grade coal to reduce mercury emissions from coal-fired power plants. By combusting K-Fuel™ a boiler is achieving mercury reduction as an added benefit since mercury removal has already occurred during the K-Fuel™ process prior to combustion. K-Fuel™ can also be an alternative to or enhancement of post-combustion mercury control technology.

While the K-Fuel™ process has not been optimized for mercury emission reduction, on average, 70% of mercury can be reduced from the feedstock through the pre-combustion process. K-Fx believes that additional mercury will be removed by already installed control technology, such as particulate matter, SO₂, and NO_x control devices. As a result, the mercury reduced in the K-Fuel™ is a beginning point for the ultimate mercury reduction achievable when burning K-Fuel™.

During the K-Fuel™ process mercury is volatilized and removed. The mercury is recovered in the liquid phase and is captured in an activated carbon filtration treatment system. K-Fx does extensive mercury analysis in our laboratory and will conduct further studies on the behavior of these elements in the K-Fuel™ process.

The amount of reduced pollutants is not equal or proportional to the increase in Btu value. Because the K-Fuel™ process includes chemical changes, such as the release of carboxylates, which increase the carbon content and reduce the oxygen content, this leads to an increase in the energy content, which will not be reflected linearly to the contaminants.

In addition to significant reductions in mercury, facilities combusting K-Fuel™ can also substantially reduce emissions of SO₂ and NO_x. Sulfur dioxide forming pollutants are recovered in the gas and liquid treatment systems. SO₂ emissions can be reduced by up to 30% when combusting K-Fuel™. Additionally, NO_x emissions from units burning K-Fuel™ can be reduced by up to 30%.

K-Fx does not expect any balance of plant problems in the downstream systems such as clogging baghouses or degrading catalysts based on commercial scale test burns to date. Once the 750,000tpy facility is in operation we will continue a program to further document test burns and K-Fuel™ benefits on a full-scale basis at third-party coal-fired boilers.



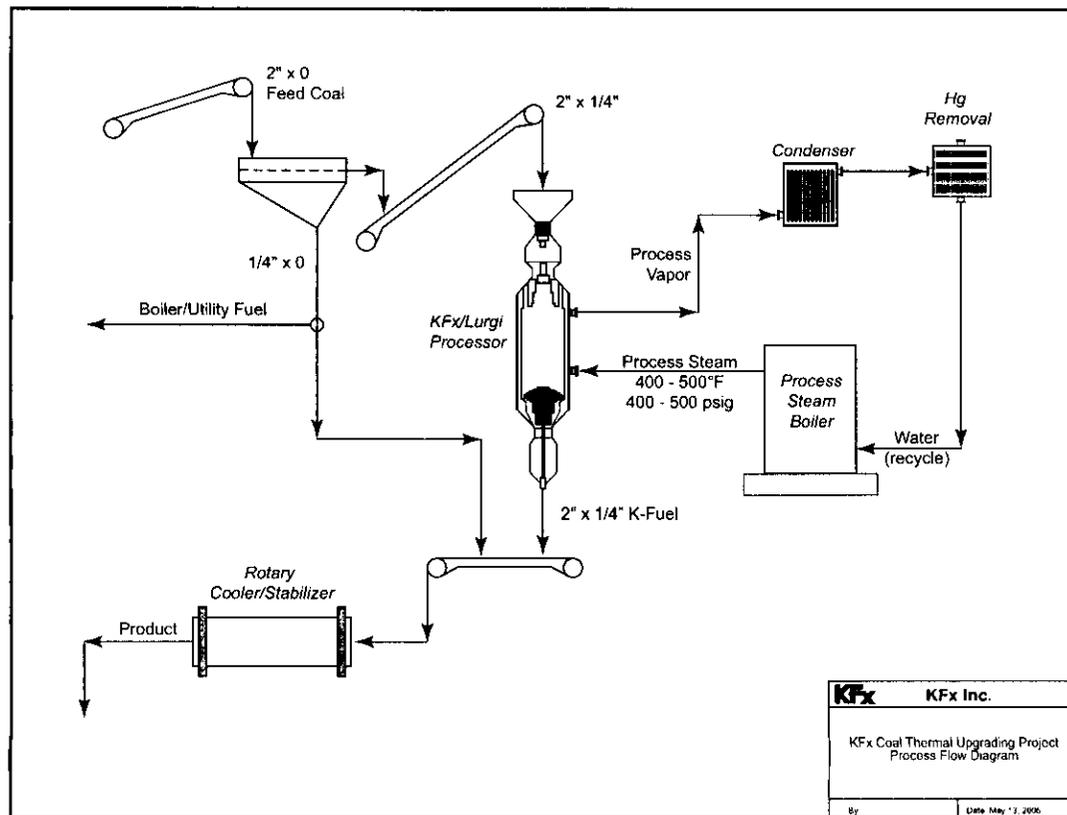
K-Fuel™ Process

The K-Fuel™ process and technology has evolved for over 20 years. The process has been optimized for increased Btu efficiency, while emissions reductions are a co-benefit of the pre-combustion process. Both mechanical and thermal means are employed to increase the quality of subbituminous coal and lignite feedstocks by reducing moisture, sulfur-forming constituents, and mercury, and increasing the heat value. The process utilizes heat, pressure and time to change the physical and chemical structure of the low-rank coal to yield a clean, stable, high-energy, low-moisture premium fuel solution.

In January of 2003, KFX formed a strategic alliance with Lurgi South Africa. Lurgi has more than 70 years of experience designing and building coal gasification plants and KFX will use the Sasol/Lurgi Mark IV Gasifier and associated equipment, which have been adapted for the K-Fuel™ production facility. This is the same equipment used in over 165 units operating throughout the world. The gasifiers will operate at a lower temperature and pressure in the K-Fuel™ process than required for gasification. Therefore, K-Fuel™ production plants are built using proven, "off the shelf," modular equipment, and there is no scale up risk using new technology that has not been rigorously tested over a significant time-frame.

Input

To begin the process, coal is delivered to the K-Fuel™ processing plant from the mine. Coal is sized to approximately 2" x 1/4" by crushing and screening equipment as the first step of the process. The screening requirement is to supply a constant sized material to the K-Fuel™ processors. Depending on the nature of the raw coal, most of the under size coal will be utilized to generate the steam required for the process. Generally, one can expect from 10-25% under size and waste (rock) material, but the type of mining operation utilized may limit this significantly.

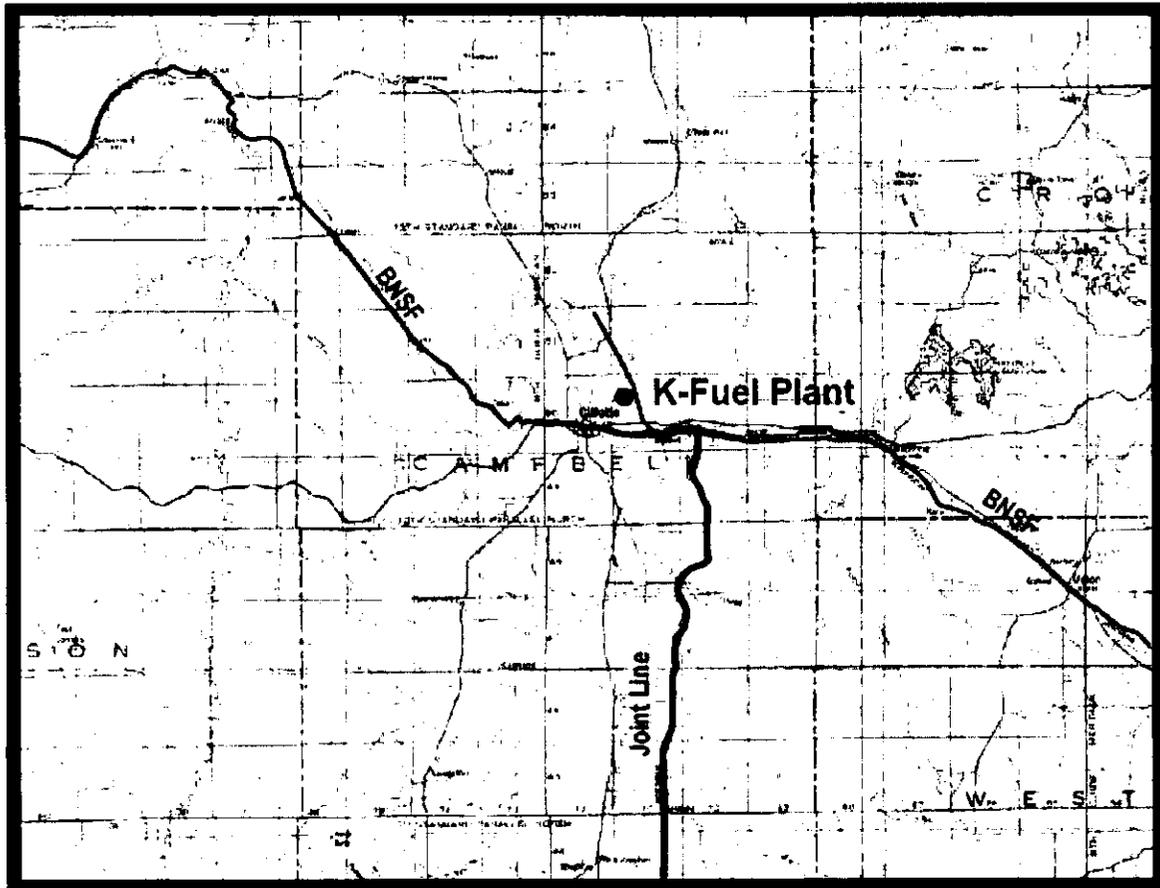




K-Fuel™ Commercialization

While the basis for the K-Fuel™ process has been known for over 20 years, it is only now becoming commercially viable as a result of changes in coal market fundamentals, federal emissions regulations, and the partnering with Lurgi SA that allows K-Fuel™ to be produced at lower cost through the use of “off the shelf” equipment.

In June 2004, KFx purchased the Fort Union mine site near Gillette, Wyoming as the location for a commercial K-Fuel™ production facility. The site includes approximately 1,000 acres of land, a rail loop with load out facilities, a coal crusher, related buildings, water disposal wells and about 1 million tons of coal reserves. The project is fully-funded by KFx with 100% equity.



Most of the feedstock coal to produce K-Fuel™ will be purchased from adjacent mines in the Powder River Basin. Initial output from the facility will be 750,000 tons per year (tpy) and two-thirds of the output has been sold. At this stage, the 750,000tpy plant will only process local subbituminous coal feedstocks. The process can treat lignite, but the feedstock used will be determined by the location of the plant and nearby mines. The facility is planned to be expanded to a maximum production of 3 million tons per year (MMtpy). KFx expects that with the first commercial plant in operation the development of future plants will be accelerated. Depending upon site specifics, 8MMtpy is the planned K-Fuel™ production facility size.



How Much Does K-Fuel™ Cost

K-Fuel™ will be sold by the ton as any coal product into higher value-added markets. Total operating costs, including the feedstock, are estimated to be \$23-26 per ton of K-Fuel™ produced (when coal-fired boilers are used). KFX projects that K-Fuel™ will be sold at a price competitive with other high BTU, low sulfur coals, such as Central Appalachian coal.

A critical cost savings component is that post-combustion control systems require significant capital costs and also require a unit to be shut down for an installation period. Post-combustion controls can also be problematic to install due to the difficulty of finding appropriate space. For a unit to burn K-Fuel™, no additional equipment is necessary to add to its system and no installation period is required with resulting lost generation. Because K-Fuel™ burns more efficiently by removing energy-robbing moisture, increased boiler and system efficiency will be realized. Post-combustion controls on the other hand can negatively impact plant efficiencies by requiring power to operate.

Use of coal combustion byproducts (CCBs) for cement, gypsum and other uses, offers a beneficial way of utilizing CCBs rather than disposing into landfills. In addition, facilities can realize financial benefits by selling CCBs instead of paying landfill costs. Since K-Fuel™ captures mercury prior to combustion and no additives are introduced onto the coal or into the flue gas, there are no negatives impacts to a unit's fly ash for post-combustion use, allowing significant savings in waste disposal volumes and costs.

KFX will profit from production tax credits that were signed into law by Congress in 2004. As a result of the tax credit, it is expected that KFX will receive \$5.50 per ton (2005\$, adjusted annually for inflation) of K-Fuel™ produced by K-Fuel™ facilities in operation before January 1, 2009. The credit lasts for 10 years from the start of production.

Another key cost component for K-Fuel™ is transportation to coal-fired facilities. The railroads will treat K-Fuel™ the same as any other coal; thus no premium will be assessed for the enhanced BTU value. K-Fuel™ does not require special handling and can load on the same basis as raw coal.

