

Clark County Public Library
Winchester, KY
Page 1 of 5

Mr. Roy Spears
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
Morgantown, WV 26507-0880

January 22, 2002

Dear Mr. Spears,

The Kentucky Pioneer Integrated Gasification Combined Cycle Demonstration Project, an electrical partnership between Eastern Kentucky Power and Global Energy of Cincinnati, OH is dangerous to the environment of Central Kentucky, detrimental to our quality of life, and finally contrary to the laws of the Commonwealth of Kentucky. For these reasons it should not be funded by the federal government. In order to operate this plant Global Energy will bring in up to 4000 tons of palletized municipal waste from New York and New Jersey into Clark County every day.

Over a year that amount of waste comes to one-half the total municipal waste of the entire state of Kentucky. It will be impossible, by any human standard, to regulate the content of that amount of refuse derived fuel. Carbon dioxide levels in the air will increase, as will levels of mercury, cadmium, arsenic and other toxic substances in air, land and water. No one can adequately predict the long- term detriments of those toxins, but we do know that high amounts of sulfur dioxide in the air can scar the lungs of young children; and, as you know, the Kentucky Pioneer plant site lays less than one mile from the Trapp elementary school where you met with the citizens of Clark County.

The immediate effects on the Kentucky River, the main drinking water source for all of Central Kentucky will be disastrous. Daily, millions of gallons of Kentucky River water will be annihilated by this plant to create hydrogen and oxygen for its fuel cells. That's millions of gallons of water completely lost. The water that is discharged from this plant will be contaminated, and the main intake of Clark County's water system lies only five miles downstream. All of this is going to happen to our community because legal definitions of the gasification process supposedly give Global Energy the right to circumvent local solid waste ordinances described in 1991 law SB2 and KRS statute 224. However, many people in the state think this circumvention of Kentucky statutes is illegal. Tom Fitzgerald of the Kentucky Natural Resources Council has already spelled out his legal objections in regard to KRS statute 224. Clark County Judge Executive Drew Graham has asked the Kentucky Attorney General to review the licensing of the Trapp plant in terms of those statutes. If necessary, these legal definitions will be challenged in court so that local autonomy over solid waste plans, something Kentuckians have fought very hard for, can be maintained.

Recently, many questions have been raised about the advisability of constructing power plants across the state of Kentucky. Governor Patton, who supported these plants, has called a moratorium on licensing new plants because of the questions raised. He also told the Public Service Commission a few weeks ago that he was going to make it more difficult for new plants to circumvent local solid waste statutes. So, even people who previously supported building new power plants in Kentucky are now reconsidering them because of their detrimental environmental, social, and economic impacts.

In light of all this, we are asking that you review the licensing Kentucky Pioneer, consider it's negative environmental and quality of life impacts, and act to help us stop this plant by withholding federal funding.

1/11

2/21

3/16

4/06

5/11

6/07

2/21

(cont.)

7/21

8/21

1/11 (cont.)

9/16

Comment No. 1

Issue Code: 11

Gasification is different from incineration. It is a better, more environmentally responsible approach to generating energy from the use of fossil fuels and refuse derived fuel (RDF). Incineration produces criteria pollutants, semi-volatile and volatile organic compounds and dioxin/furan compounds. Ash from hazardous waste incinerators is considered a hazardous waste under the *Resource Conservation and Recovery Act (RCRA)*. In contrast, gasification, which occurs at high temperatures and pressures, produces no air emissions, only small amounts of wastewater containing salts. Synthesis gas (syngas) produced from the gasification process has very low concentrations of particulates, NO_x and SO_x. Non-volatile trace metals in the feed concentrate in the vitrified frit and are effectively immobilized, eliminating or reducing their leachability. The frit from BGL Gasifiers operating on a 100 percent coal feed has consistently been shown to be nonhazardous under RCRA. Since this project will be using a different feed stream, the first batch of frit should be tested to ensure that it meets all Toxicity Characteristic Leaching Procedure (TCLP) criteria and therefore nonhazardous under RCRA and applicable Kentucky laws and regulations.

Heavy metals and mercury would be emitted only from the power island component (combustion turbines) of the Kentucky Pioneer IGCC Demonstration Project. Total heavy metal deposition in areas downwind of the project would be much less than 1.1 kilogram per hectare (1 pound per acre) accumulated over a 20-year period and present little risk to human health and the environment.

Comment No. 2

Issue Code: 21

KPE is not attempting to circumvent Kentucky Revised Statutes (KRS) 224, or any other state or local laws. KPE has appealed to the state for an interpretation of the language of applicable solid waste laws regarding RDF. The Kentucky Natural Resources and Environmental Protection Cabinet, Department of Environmental Protection, Division

**Clark County Public Library
Winchester, KY
Page 2 of 5**

We want to keep our environment, our farmlands and our waterways, clean; we do not want 800 ft. tall cracking towers fouling our scenery, and we do not want the traffic congestion and garbage stock piling this plant will cause.

The entire operational concept of this plant is an insult to all Kentuckians. It was not bad enough that industrial conglomerates got to pillage our lands and resources during the 20th century. Is the government now going to allow 21st century conglomerates to poison and bury us with their garbage?

I sincerely hope not.

John Maruskin
Adult Services Librarian
Clark County Public Library
859-737-2482 (h)
859-744-5661 (w)
ziroonderel@yahoo.com

Also on behalf of:

Lisa Collins
2344 Harrodsburg Rd.
Lexington, KY 40503

William S. Herrick
4859 Flat-Mary Rd
Campton, KY 41301

Ramesh Bhatt
Sierra Club Cumberland (Kentucky) Chapter
1000 Rain Court
Lexington, KY 40515

Tom Fitzgerald
Kentucky Resources Council
P.O. Box 1070
Frankfort, KY 40602

Elizabeth Crowe
Kentucky Environmental Foundation
P.O. Box 467
Berea, KY 40403

Naomi Schulz
Member, Kentuckians for the Commonwealth (KFTC)
109 Phillips Street
Berea, KY 40403

Phil Crewe
1817 Traveller Rd.
Lexington KY 40504

10/05, 6/07
(cont.)
11/04
12/10
13/12

Comment No. 2 (cont.)

Issue Code: 21

of Waste has determined that the RDF is a recovered material and not waste. The Kentucky Pioneer IGCC Demonstration Project facility will be considered a recovered material processing facility and the gasification process will not require a waste permit as long as the RDF conforms to the statutory definition. A discussion of this issue has been added to Chapter 1 and Chapter 6 of the EIS.

13/12
(cont.)

Comment No. 3

Issue Code: 16

Chapter 3, Section 3.2.2.2, discusses the production and composition of the RDF pellets. KPE intends to supply all RDF pellets for this project from the same manufacturer. The gasification technology used produces a very consistent syngas product, regardless of the variability of the feed. Variation in RDF pellet composition due to different manufacturing processes should not be an issue for this project.

Comment No. 4

Issue Code: 06

Comment noted. Hazardous air pollutant emissions from the proposed project are identified in Table 5.7-2 of the EIS. The estimated maximum lifetime cancer risks associated with exposure to these emissions from the proposed project are presented in Table 5.7-4 of the EIS. As noted in the EIS, the proposed project would produce about 1.45 million metric tons (1.6 million tons) of greenhouse gas emissions per year (mostly carbon dioxide). This would be about 25 percent less than the amount produced by a comparable natural gas fueled power plant. Impacts to land and water are discussed in Sections 5.6, Geology, and 5.8, Water Resources and Water Quality, respectively, in the EIS.

Comment No. 5

Issue Code: 11

Comment noted. Modeling is the best tool available to determine the possible fate and transport of a substance in the environment to a receptor and the likely health consequences. This tool is very conservative in the estimate of health effects in order to protect the most sensitive members of the population. Dispersion modeling

Clark County Public Library
Winchester, KY
Page 3 of 5

Comment No. 5 (cont.)

Issue Code: 11

conducted for the Prevention of Significant Deterioration (PSD)/Title V permit application covered an area approximately 12 kilometers (7.5 miles) from the project site. The location of maximum impact was covered within this area.

Maximum air pollutant increments associated with emissions from the proposed project indicated that no significant air quality impacts would occur on either a short-term or long-term basis. Locations 24 to 40 kilometers (15 to 25 miles) away would be exposed to lower pollutant levels than the area covered by the dispersion modeling analysis. Total heavy metal deposition in areas downwind of the project would be much less than 1.1 kilogram per hectare (1 pound per acre) accumulated over 20 years.

More than 99 percent of the sulfur content of the raw fuel (coal and RDF) are removed and recovered by the sulfur removal and recovery process. The sulfur is converted to elemental sulfur, a marketable product. The sulfur compounds that would be emitted from the proposed project are listed in Tables 5.7-1 and 5.7-2 of the EIS. The emitted concentrations are well below reference concentrations and/or air quality standards that would cause acute or short-term adverse effects to the brain, eye, nervous system, nasal passages, and lungs.

Comment No. 6

Issue Code: 07

As stated in Section 5.8 of the EIS, Water Resources and Water Quality, treated wastewater is expected to contain conventional pollutants such as nitrogen, phosphorus, total dissolved solids, and biological and chemical oxygen demand. Pollutant discharge limitations would be set by the Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water's Water Resources Branch and would be identified in the Kentucky Pollutant Discharge Elimination System (KPDES) permit. These limitations would be established based on site-specific computer modeling of the

Clark County Public Library
Winchester, KY
Page 4 of 5

Comment No. 6 (cont.)

Issue Code: 07

expected effect on water quality of the Kentucky River at the proposed discharge point and in the mixing zone immediately downgradient. The limits specified in the permit would be protective of existing water quality. Fuel cells do not consume water to generate electricity. Furthermore, the fuel cell demonstration has been moved to the existing Wabash River IGCC Plant near West Terre Haute, Indiana.

The Water Resources Branch pays particular attention to the proximity of wastewater discharges to drinking water intakes. New sources of wastewater are prohibited within 8 kilometers (5 miles) of a water treatment plant intake. This 8-kilometer (5-mile) limit was established to provide an additional layer of protection for the water quality found at drinking water intakes over treatment alone and is referred to as Zone 1. Zone 2 extends from 8 to 16 kilometers (5 to 10 miles), while Zone 3 is the area from 16 to 40 kilometers (10 to 25 miles) from a water treatment plant intake. The proposed outfall is located in Zone 3 for the Winchester Water Treatment Plant. Water collected at the treatment plant is tested and treated to meet all federal and state requirements concerning drinking water quality. Therefore, no impacts to drinking water are expected.

Comment No. 7

Issue Code: 21

Comment noted.

Comment No. 8

Issue Code: 21

The EIS is part of the review to evaluate the project. DOE will issue the Record of Decision (ROD) based on the findings of the EIS and comments from the public.

Comment No. 9

Issue Code: 16

Comment noted. After the Final EIS is issued, DOE will consider all public comments on the project before issuing its ROD.

Clark County Public Library
Winchester, KY
Page 5 of 5

Comment No. 11 **Issue Code: 04**
Comment noted. Impacts to the aesthetic and scenic environment of the project area are presented in Section 5.5 of the EIS, Aesthetic and Scenic Resources. The tallest structures that would be built for this project are the facility stacks for the gasifiers. These structures would stand 65 meters (213 feet) in height.

Comment No. 10 **Issue Code: 05**
All raw materials and wastes would be stored and handled in enclosed areas that would not be in direct contact with local soil. Therefore, no impacts to local farmland would be expected from operation of the plant.

Comment No. 12 **Issue Code: 10**
Comment noted. Specific traffic impacts are presented in Section 5.11, Traffic and Transportation.

Comment No. 13 **Issue Code: 12**
The proposed project would store approximately two 10-day supplies of RDF pellets. No garbage would be stockpiled on site. The proposed project would produce primarily vitrified frit, which is considered a commercial product and not a waste stream. Solid waste generated at the proposed facility would be landfilled in the State of Kentucky. Hazardous waste would be disposed of in accordance with applicable state and federal laws at a licensed hazardous waste disposal facility. As a generator of waste, KPE has to comply with state and federal regulations pertaining to waste storage, handling, transport, and disposal. The purpose of these regulations is to protect the public's health and environment by minimizing the impact of pollution.