

## **APPENDIX D**

### **COMMENT RESPONSE DOCUMENT**

#### **D.1 Introduction**

On November 16, 2001, the U.S. Department of Energy (DOE) published the *Kentucky Pioneer Integrated Gasification Combined Cycle Demonstration Project Draft Environmental Impact Statement* (Kentucky Pioneer IGCC Demonstration Project Draft EIS). The Kentucky Pioneer IGCC Demonstration Project Draft EIS assessed the potential environmental impacts that would result from the Proposed Action to provide cost-shared financial support for construction and operation of an electrical power station demonstrating use of a Clean Coal Technology in Clark County, Kentucky. Under the Proposed Action, DOE would provide financial assistance, through a Cooperative Agreement with Kentucky Pioneer Energy, LLC (KPE), for design, construction, and operation of a 540 megawatt demonstration power station comprised of two syngas-fired combined cycle units in Clark County, Kentucky. The station would also be comprised of a British Gas Lurgi (BGL) gasifier to produce synthesis gas (syngas) from a cofeed of coal and refuse-derived fuel pellets. The facility would be powered by the syngas feed. Two No Action Alternatives are analyzed in the Kentucky Pioneer IGCC Demonstration Project Draft EIS. Under No Action Alternative 1, DOE would not provide cost-shared funding for construction and operation of the proposed facility and no new facility would be built. Under No Action Alternative 2, DOE would not provide any funding and, instead of the proposed demonstration project, KPE would construct and operate a 540 megawatt natural gas-fired power station. Following requirements set forth in the *National Environmental Policy Act* (NEPA) and its implementing regulations, DOE established a comment period to allow the public to review and comment on the Kentucky Pioneer IGCC Demonstration Project Draft EIS. The public comment period was from November 16, 2001, through January 4, 2002. To accommodate requests from the public, DOE extended the public comment period on the Kentucky Pioneer IGCC Demonstration Project Draft EIS from January 4, 2002, to January 25, 2002. However, late comments were fully considered.

Two public meetings at two different locations were held during the comment period so that members of the public could provide comments and receive feedback to questions on the Kentucky Pioneer IGCC Demonstration Project Draft EIS. One meeting was held on December 10, 2001, at the Lexington Public Library in Lexington, Kentucky, and the other on December 11, 2001, at Trapp Elementary School in Trapp, Kentucky. In addition, the public was encouraged to submit comments via U.S. mail, electronic mail, facsimile, telephone and through written and verbal comments submitted at the public meetings. The public meetings were recorded by a court reporter to provide a verbatim transcript of the proceedings and record any formal comments.

Attendance at each meeting and the number of comments recorded, as well as the documents received via other methods during the public comment period, are presented in Tables D-1 and D-2, respectively. Attendance numbers for the public meetings were based on the number of participants who signed the attendance sheets that were provided. Some commentors submitted the same comments via a number of methods (i.e., fax and mail). In this instance, the comments were analyzed to ensure that they are the same comments, if they were exactly the same, they were counted as one submittal. The more legible submittal was included in this section.

**Table D-1. Meeting Attendance and Oral Comments**

<b>Public Meetings</b>	<b>Date</b>	<b>Attendees</b>	<b>Oral Comments</b>
Lexington, KY	December 10, 2001	21	53
Trapp, KY	December 11, 2001	41	65
<b>Total</b>		<b>62</b>	<b>118</b>

**Table D-2. Document and Comment Submission Overview**

<b>Method of Submission</b>	<b>Documents Received</b>	<b>Comments</b>
Mail-in	31	226
Fax	2	14
Public Hearing Transcript	2	118
Electronic Mail	1	3
Telephone	2	12
<b>Total</b>	<b>38</b>	<b>373</b>

## **D.2 COMMENT ANALYSIS AND RESPONSE PROCESS**

Tables are provided in this section to assist readers in locating comments regarding the Kentucky Pioneer IGCC Demonstration Project Draft EIS. Comments were identified and categorized by issue (e.g., water resources, air quality, proposed action) and assigned a two digit issue code. An issue code is the term assigned to a general topic to identify similar comments for proper response. Table D-3 lists general topics and corresponding issue codes. The issue codes were developed based on the topics discussed in the Kentucky Pioneer IGCC Demonstration Project Draft EIS. The majority of identified comments were responded to on a one-by-one basis. Comments that are similar in content were given the same response.

Table D-4 identifies public meeting attendees at each meeting. Table D-5 identifies the public meeting attendees that provided oral comments and the corresponding transcript page number identifying the beginning of the comments. Table D-6 lists all individuals, agencies, companies, organizations, and special interest groups' comment documents, including comments from the public meeting attendees. Commentors are listed alphabetically by last name or organization with the corresponding page number on which the actual comment appears. Also listed in this table is the issue code assigned to the comments found within each document. Table D-7 lists those documents considered to be multiple signatory documents, showing the page numbers where the actual comments and assigned issue codes appear. A multiple signatory document is a document that has been submitted or signed by more than two individuals or organizations.

Commentors wishing to view comments similar in content should refer to Table D-8, which lists the issue codes of the general topics and the page numbers where the similar comments are located. Multiple page numbers indicate several comments on the same issue.

**Table D-3. Kentucky Pioneer IGCC Demonstration Project EIS Issue Codes**

<b>Code</b>	<b>Issue</b>
01	Land Use
02	Socioeconomics
03	Cultural Resources
04	Aesthetic and Scenic Resources
05	Geology
06	Air Resources
07	Water Resources and Water Quality
08	Ecological Resources
09	Noise
10	Traffic and Transportation
11	Occupational and Public Health and Safety
12	Waste Management
13	Environmental Justice
14	Policy/Purpose and Need/Scope
15	Cost and Schedule
16	Proposed Action
17	No Action Alternative 1
18	No Action Alternative 2
19	Alternative Considered But Eliminated
20	Other NEPA Section
21	Regulatory Compliance <ul style="list-style-type: none"><li>• NEPA Process</li><li>• Public Involvement/Community Relations</li></ul>
22	Outside the Scope of the EIS
23	Editorial

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**Table D-4. Public Meeting Attendees**

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**Attendees on December 10, 2001-Lexington, KY**

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Amick, Mark, Lexington, KY  
Anderson, Joe, Lexington, KY  
Bhatt, Ramesh, Lexington, KY  
Caicedo, Ed, ECI Engineers, Lexington, KY  
Carew, Mark, Irvine, KY  
Caufield, Rita, Lexington, KY  
Collins, Lisa, Lexington, KY  
Crewe, Phil, Sierra Club, Lexington, KY  
Draus, Patty, Lexington, KY  
Herrick, Will, Campton, KY  
Hopper, Hillary Lambert, Sierra Club, Lexington, KY  
Huestis, Chris, Lexington, KY  
Lockwood, Dwight, Global Energy, Cincinnati, OH  
Mattingly, Jim, Lexington, KY  
McCarthy, Bernard, Lexington, KY  
McKenzie, Erin, Lexington, KY  
Pratt, Don, Lexington, KY  
Schulz, Naomi, Kentucky Environmental Foundation, Berea, KY  
Shadowen, Joey, Lexington, KY  
Talwalkar, Chetan, Lexington, KY  
Tuttle, Bettie, Lexington, KY

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**Attendees on December 11, 2001-Trapp, KY**

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Bailey, Robert C., Winchester, KY  
Ballard, William, East Clark County Water, Winchester, KY  
Beck, Neeley, Beattyville, KY  
Collins, Lisa, Lexington, KY  
Curtis, Robert E., Winchester, KY  
Elores, Curtis, Lexington, KY  
Epperson, Gary, Clark County EMA, Winchester, KY  
Fisher, Robert L., Winchester, KY  
Graham, Drew, County Judge, Winchester, KY  
Grimes, Donna, Winchester, KY

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**Table D-4. Public Meeting Attendees (continued)**

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Halk, Michael M., Winchester, KY  
Hamilton, Roy, Winchester, KY  
Herrick, Will, Campton, KY  
Hisle, Dalous W., Winchester, KY  
Hughes, Jeff, Winchester, KY  
Isaacs, Mark, Laborers Local 189, Lexington, KY  
Lester, P. Lynn, Campton, KY  
Lockwood, Dwight, Global Energy, Cincinnati, OH  
Maruskin, Julie, Clark County Public Library, Winchester, KY  
Maruskin, John, Clark County Public Library, Winchester, KY  
McIntoch, Jerry, Winchester, KY  
Miller, Jeremy, International Laborers, Winchester, KY  
Miller, Shelby, LIUNA Local 189, Winchester, KY  
Parker, Charles Ray, Winchester, KY  
Pasley, Don, State Representative, Frankfort, KY  
Potter, Deby, Winchester, KY  
Potter, Larry, Winchester, KY  
Preston, Leslie, Winchester, KY  
Rector, Tommy, Winchester, KY  
Schureman, Jerry, East Kentucky Power, Winchester, KY  
Stickney, Jack, Irvine, KY  
Thalacker, Mark A., Winchester, KY  
Vickery, Jon P., Winchester, KY  
Walters, Pat, Winchester, KY  
Walters, Charles T., Winchester, KY  
Wells, James, Winchester, KY  
Wells, Lloyd, Winchester, KY  
Williams, Samuel, Winchester, KY  
Willian, Lance, Lexington Harold Leader

Willoughby, Harold C., Winchester, KY

**Table D-5. Index of Attendees at Public Meetings that Presented Comments**

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<b>Commentors</b>	<b>Transcript Page Number</b>
<b>December 10, 2001-Lexington, KY</b>	
Bhatt, Ramesh, Lexington, KY	D-273
Crewe, Phil, Sierra Club, Lexington, KY	D-269
Draus, Patty, Lexington, KY	D-278
Herrick, Will, Campton, Ky	D-296
Huestis, Chris, Lexington, KY	D-286
McCarthy, Bernard, Lexington, KY	D-284
McKenzie, Erin, Lexington, KY	D-290
Schulz, Naomi, Kentucky Environmental Foundation, Berea, KY	D-280
Talwalkar, Chetan, Lexington, KY	D-289
<b>December 11, 2001-Trapp, KY</b>	
Beck, Neeley, Beattyville, Ky	D-359
Bailey, Robert C., Winchester, KY	D-316
Collins, Lisa, Lexington, KY	D-353
Fisher, Robert, Winchester, KY	D-373
Herrick, Will, Campton, KY	D-340
Herrick, Will, Campton, KY (on behalf of Tom Fitzgerald, Kentucky Resources Council)	D-328
Maruskin, Julie, Clark County Public Library, Winchester, KY	D-347
Maruskin, John, Clark County Public Library, Winchester, KY	D-349
Rector, Tommy, Winchester, KY	D-319
Stickney, Jack, Irvine, KY	D-369
Walters, Charles T., Winchester, KY	D-320
Williams, Samuel, Winchester, KY	D-365

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**Table D-6. Index of Commentors**

<b>Commentor Information</b>	<b>Issue Codes</b>	<b>Page Number</b>
Bailey, Robert C., Winchester, KY	07, 12, 16	D-316
Beck, Neeley, Beattyville, KY	21	D-359
Bhatt, Ramesh, Lexington, KY	04, 06, 07, 11, 12, 14, 16, 20, 21	D-273
Clark County Public Library, Winchester, KY, John Maruskin, et al.	04, 06, 07, 10, 11, 12, 16, 21,	D-1
Collins, Lisa, Lexington, KY	04, 06, 07, 09, 10, 11, 12, 16, 21	D-354
Collins, Lisa P., Lexington, KY	21	D-6
Collins, Lisa P, Lexington, KY	03,04, 05, 07, 10, 12, 14, 16, 21	D-8
Collins, Thomas N., Paris, KY	06, 10, 12, 16, 21, 22	D-15
Commonwealth of Kentucky, House of Representative, State Representative, Mr. Don Pasley	02, 06, 07, 10, 11, 12,14, 16, 20, 21, 22	D-20
Crewe, Phill, Lexington, KY	05, 06, 07, 12, 16, 21, 22	D-41
Crewe, Phil, Lexington, KY	06, 16, 21	D-293
Crewe, Phil, Sierra Club, Lexington, KY	04, 07, 12, 13, 14	D-269
Draus, Patty, Lexington, KY	07, 12, 14, 16	D-278
Fisher, Robert, Winchester, KY	No Comments Identified	D-373
Gen. Apps, Inc., Winchester, KY, Vincent Robert	06, 11, 16	D-46
Gulick, Brandon, Lexington, KY	06	D-47
Gulick, Michael, Lexington, KY	06, 16	D-48
Gulick, Pam, Lexington, KY	06, 10, 16	D-49
Herrick, Will, Campton, KY	10, 11, 12	D-375
Herrick, Will, Campton, KY	02, 06, 07, 12, 21	D-296
Herrick, Will, Campton, KY	06, 11, 12, 14, 18, 21, 22	D-340
Herrick, Will, Campton, KY (on behalf of Tom Fitzgerald, Kentucky Resources Council)	21	D-328
Herrick, William, Campton, KY	02, 06, 07, 11, 12, 13, 14, 16, 18, 21, 22	D-50

**Table D-6. Index of Commentors (continued)**

<b>Commentor Information</b>	<b>Issue Codes</b>	<b>Page Number</b>
Howe, J, Clark County, KY	04, 06, 07, 11, 16, 21, 22	D-158
Huestis, Chris, Lexington, KY	11, 14, 22	D-286
Johnson, Peggy, Lexington, KY	02, 04, 12, 16	D-161
Jones, Ramona, Lexington, KY	02,07,16	D-164
Jones, Michael B, Lexington, KY	02, 12, 16, 22	D-162
Kentucky Department of Fish and Wildlife Resources, Frankfort, KY, C. Tom Bennett	08	D-244
Kentucky Environmental Foundation, Berea KY, Elizabeth Crowe, et al.	06, 11, 14, 16, 17, 20, 21, 22	D-165
Kentucky Natural Resources and Environmental Protection Cabinet, Frankfort, KY, Alex Barber	21	D-246
Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water, Frankfort, KY, Timothy Kuryla	07, 08, 21	D-249
Kentucky Natural Resources and Environmental Protection Cabinet, Division of Waste Management, Frankfort, KY	12	D-248
Kentucky Resources Council, Inc., Frankfort, KY, Tom Fitzgerald	06, 11, 12, 14, 16, 21, 22	D-170
Littrell, Maxine, Lexington, KY	16, 22	D-251
Maruskin, John, Clark County Public Library,	06, 10, 11, 14, 16, 22	D-349
Maruskin, Julie, Clark County Public Library,	16, 21	D-347
McCarthy, Bernard, Lexington, KY	02, 10, 11, 14, 16, 21, 22	D-284
McKenzie, Erin, Lexington, KY	11, 16, 14, 21, 22	D-290
Neighbors Opposing Pipeline Extravagance, Lexington, KY, David S. Cooper	07, 20, 22	D-252
Parker, Charles Ray, Winchester, KY	16, 21	D-254
Pratt, Don, Lexington, KY	04, 12, 22	D-255
Preston, John, Lexington, KY	21, 22	D-256



**Table D-6. Index of Commentors (continued)**

<b>Commentor Information</b>	<b>Issue Codes</b>	<b>Page Number</b>
Preston, Virginia, Lexington, KY	12, 16, 22	D-257
Public Comment Meeting, December 10, 2001, Lexington, KY	02, 04, 06, 07, 08, 10, 11, 12, 13, 14, 16, 20, 21, 22	D-258
Public Comment Meeting, December 11, 2001, Trapp, KY	02, 04, 06, 07, 09, 10, 11, 12, 14, 16, 18, 20, 21, 22	D-302
Rector, Tommy, Winchester, KY	06, 07, 10, 16, 21	D-319
Schulz, Naomi, Kentucky Environmental Foundation, Berea, KY	06, 11, 16, 22	D-280
Shoebrooks, Jeff and Robin, Winchester, KY	03, 06, 08, 10, 11, 16, 22	D-381
Sierra Club Cumberland Chapter, Lexington, KY, Ramesh Bhatt	03, 04, 06, 07, 11, 12, 16, 21, 20, 22	D-391
Smith, Bobbye W., Winchester, KY	16, 22	D-403
Stickney, Jack, Irvine, KY	02, 06, 12, 16, 20, 22	D-369
Talwalkar, Chetan, Lexington, KY	04, 08, 22	D-289
Taulbee, Dan and Lisa, Lexington, KY	11, 16	D-404
United States Department of the Interior, Atlanta, GA, Gregory L. Hogue	06, 07, 08, 16, 21	D-406
United States Environmental Protection Agency, Region 4, Atlanta, GA, Heinz Mueller	06, 07, 08, 21	D-407
Vickery, Jon P., Winchester, KY	02, 07, 10, 11, 12, 16, 21, 23	D-410
Walters, Charles T., Winchester, KY	02, 06, 10, 11, 14, 16,	D-320
Williams, Samuel, Winchester, KY	10, 12, 16, 22	D-365
Wurtenberger, Patty Rae, Winchester, KY	06, 16, 21	D-416

**Table D-7. Index of Commentors, Multiple Signatory Documents**

<b>Organization/Commentor Name</b>	<b>Issue Code Number</b>	<b>Page Number</b>
Kentucky Environmental Foundation, Berea, KY, Elizabeth Crowe	06, 11, 14, 16, 17, 20, 21, 22	D-165
Sierra Club Cumberland Chapter, Lexington, KY, Ramesh Bhatt		
Herrick, William S., Campton, KY		
Kentuckians for the Commonwealth, Berea, KY, Naomi Schulz		
Collins, Lisa, Lexington, KY		
Clark County Library, Winchester, KY, John Maruskin		
Kentucky Resource Council, Frankfort, KY, Tom FitzGerald		
Crewe, Phil, Lexington, KY		
Clark County Public Library, Winchester, KY, John Marukin	04, 06, 07, 10, 11, 12, 16, 21	D-1
Collins, Lisa, Lexington, KY		
Herrick, William S., Campton, KY		
Sierra Club Cumberland Chapter, Lexington, KY, Ramesh Bhatt		
Kentucky Resources Council, Frankfort, KY, Tom Fitzgerald		
Kentucky Environmental Foundation, Berea, KY, Elizabeth Crowe		
Kentuckians for the Commonwealth, Berea, KY, Naomi Schulz		
Crewe, Phil, Lexington, KY		
Commonwealth of Kentucky, House of Representatives, State Representative, Mr. Don Pasely, Frankfort, KY	02, 06, 07, 10, 11, 12, 14, 16, 20, 21, 22	D-20
Adult Services Librarian, Clark County Public Library, Winchester, KY, John Maruskin		
Leslie Preston, Winchester, KY		

**Table D-8. Index of Issue Codes**

<b>Issue Code Number</b>	<b>Page Numbers</b>
01	None
02	D-23, D-65, D-69, D-161, D-162, D-164, D-285, D-298, D-324, D-370, D-411
03	D-9, D-10, D-384, D-393
04	D-2, D-9, D-10, D-158, D-161, D-255, D-272, D-276, D-289, D-356, D-393
05	D-2, D-10, D-41
06	D-1, D-10, D-15, D-38, D-42, D-46, D-47, D-48, D-49, D-65, D-66, D-158, D-166, D-181, D-276, D-282, D-294, D-296, D-319, D-320, D-345, D-346, D-347, D-351, D-358, D-370, D-384, D-393, D-408, D-409, D-412, D-416
07	D-1, D-9, D-10, D-21, D-23, D-38, D-42, D-66, D-158, D-164, D-249, D-250, D-252, D-271, D-277, D-278, D-296, D-317, D-320, D-358, D-393, D-394, D-408, D-411
08	D-244, D-250, D-289, D-382, D-385, D-408
09	D-358
10	D-2, D-9, D-17, D-38, D-49, D-284, D-319, D-325, D-352, D-355, D-357, D-366, D-375, D-383, D-410, D-411, D-412, D-413
11	D-1, D-39, D-46, D-66, D-69, D-158, D-166, D-182, D-274, D-281, D-287, D-291, D-323, D-346, D-352, D-358, D-375, D-385, D-394, D-404, D-412
12	D-2, D-9, D-18, D-38, D-41, D-65, D-68, D-69, D-161, D-162, D-180, D-181, D-248, D-255, D-257, D-270, D-273, D-279, D-298, D-317, D-344, D-358, D-367, D-372, D-375, D-392, D-410, D-414
13	D-53, D-69, D-270
14	D-9, D-21, D-53, D-65, D-165, D-166, D-171, D-177, D-179, D-180, D-269, D-273, D-275, D-279, D-288, D-292, D-327, D-340, D-353
15	None
16	D-1, D-10, D-15, D-18, D-21, D-23, D-38, D-39, D-41, D-42, D-46, D-48, D-49, D-53, D-158, D-161, D-162, D-164, D-166, D-167, D-180, D-251, D-254, D-257, D-275, D-279, D-283, D-284, D-285, D-292, D-293, D-294, D-316, D-319, D-321, D-348, D-349, D-352, D-355, D-358, D-365, D-366, D-371, D-381, D-386, D-387, D-391, D-392, D-403, D-404, D-406, D-410, D-411, D-412, D-416
17	D-165
18	D-53, D-340
19	None
20	D-21, D-167, D-253, D-276, D-370, D-393, D-394
21	D-1, D-6, D-10, D-11, D-18, D-23, D-41, D-53, D-65, D-69, D-158, D-166, D-171, D-246, D-249, D-254, D-256, D-274, D-288, D-291, D-295, D-297, D-319, D-329, D-341, D-348, D-354, D-361, D-262, D-364, D-393, D-394, D-395, D-405, D-409, D-413, D-416
22	D-16, D-21, D-23, D-41, D-53, D-65, D-66, D-70, D-158, D-162, D-165, D-166, D-170, D-252, D-253, D-255, D-256, D-257, D-280, D-282, D-283, D-286, D-290, D-292, D-327, D-343, D-351, D-353, D-368, D-370, D-372, D-385, D-393, D-404
23	D-410, D-411, D-412, D-414

### **D.3 CHANGES MADE TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT AS A RESULT OF PUBLIC COMMENTS**

During the 71-day public comment period, DOE received a total of 373 comments (Tables D-1 and D-2) on the Kentucky Pioneer IGCC Demonstration Project Draft EIS. DOE considered and responded to all comments received during the comment period. Several issues emerged from the public comments. Some of these issues necessitated changes in the Kentucky Pioneer IGCC Demonstration Project Draft EIS. These changes were incorporated into the Kentucky Pioneer IGCC Demonstration Project Final EIS. Among the topics or issues raised in the comments were concerns about the following:

- applicability of and compliance with state and local solid waste statutes
- detail of the facility and BGL process description
- potential of the vitreous frit to be hazardous and related waste management issues
- need for power in central Kentucky
- impacts of the related transmission line
- impacts to the Kentucky River
- impacts of facility discharges on local drinking water
- impacts of air emissions from the facility
- handling of materials and waste to reduce impacts from potential spills
- impacts to the aesthetic and scenic resources of the area
- impacts to Kentucky Highway 89 and local traffic levels
- cumulative impacts of the proposed project and other potential local developments

In addition to providing a response to each comment received, DOE revised the appropriate sections to provide any requested information that was newly available or to further explore areas of potential impact. Additional technical details not available at the time of issuance of the Draft EIS enabled further revisions and additions to the Final EIS.

### **D.4 COMMENT DOCUMENT AND RESPONSES**

The remainder of this section presents the scanned images of original documents submitted to DOE on the Kentucky Pioneer IGCC Demonstration Project Draft EIS, comments recorded as part of the transcripts of the public meetings, and DOE responses to each comment. The scanned images are marked with sidebars denoting the identified comments and DOE responses corresponding to these comments. The responses to comments identical or similar in nature were repeated throughout the document. Comments that were assigned the same issue codes indicate that they pertained to the same general topic but may not necessarily have an identical response.

In most instances, the response is found on the same page as the corresponding comment. However, in cases where many comments were identified on a single page, the responses to those comments may appear on the following pages.

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

1 8/21

1/11 (cont.)

1 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<sub>x</sub> and SO<sub>x</sub>. 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.)  
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13/12  
13/12  
(cont.)

**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.

**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  
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**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.

**Collins, Lisa P.**  
**Lexington, KY**  
**Page 1 of 2**

December 17, 2001

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

Dear Mr. Spears:

I am writing concerning the public hearings held in Lexington and Trapp, Kentucky on December 10 and 11 in relation to the Kentucky Pioneer Integrated Gasification Combined Cycle Demonstration Project Draft Environmental Impact Statement. While this is the first time that I have attended public hearings of this nature, the overwhelming impression left with me is that Kentuckians have not had the opportunity to review the Trapp EIS and were at a distinct disadvantage at the public hearings, the format of which did not allow for participants to learn about the proposed project. In addition, because the EIS has not been available in the public library in Clark County, the county on which the proposed project would have the most impact, Kentuckians have not been privy to the due process that these public hearings are designed to provide.

As you stated at the December 11 hearing in Trapp, advertising in the Louisville, Lexington and Winchester newspapers proved to be ineffective. I do not know where these public notices appeared, but if they appeared in the classified section of the newspapers, this is indeed an obsolete way to communicate. As you recommended, public notices of this importance should be disseminated via television and radio, and I add to your proposal that the notices should appear as display advertisements as opposed to classified advertisements. Additionally, it is only right that residents be given greater access to the EIS. Placing one copy in the public library is not a strong attempt at notification (and even that did not occur in the instance of Winchester in Clark County). Cannot is this document be available on the Web, and multiple copies available at all local schools, libraries, and courthouses? Additionally, the proposed project is extremely close to Estill and Madison counties, and Clark County is contiguous to Montgomery, Bourbon, Powell, and Fayette counties as well. Should not the public hearings have been advertised in these counties, and the EIS distributed there?

In light of the events to date, I am requesting the following:

- 1) that the EIS be made available on the Web and multiple copies sent to all schools, public libraries, and courthouses in Fayette, Clark, Madison, Estill, Powell, Bourbon and Montgomery counties;
- 2) that a second series of public hearings be held following a reasonable length of time beyond a thorough distribution of the EIS;
- 3) that the deadline for written comments be extended.

**Comment No. 1**

**Issue Code: 21**

NEPA requires that the public have the opportunity to comment on Draft EISs. The formal hearing was designed to obtain input from the public. Each of the public hearings was preceded by an informal open house during which members of the project staff were available to answer questions. One copy each of the Draft EIS was sent to Trapp Elementary School, Clark County Public Library (the designated project reading rooms), and Lexington Public Library during the general distribution on November 7, 2001. A public hearing in Lexington, Kentucky, was added in response to comments received during the scoping period. The public hearing dates, times, and locations were announced in the *Federal Register*, in local newspapers, *The Winchester Sun* and *The Lexington Herald-Leader*, and in public service announcements. All requirements in state and federal laws, rules, and regulations regarding announcements for public hearings were satisfied or surpassed. Due to security concerns resulting from the events of September 11<sup>th</sup>, DOE removed all NEPA documents from the agency's website. However, DOE distributed paper copies of the Draft EIS to all persons, organizations or agencies who commented during the scoping process or expressed interest in the Proposed Action. The comment period was extended through January 25, 2002. The Final EIS will be distributed to elected officials and any interested parties in neighboring counties. DOE will consider all public comments before issuing the ROD. The ROD will be issued no sooner than 30 days after the Final EIS is distributed and a notice of its availability is issued.

1/21

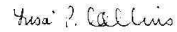
1/21  
(cont.)

1/21  
(cont.)

**Collins, Lisa P.**  
**Lexington, KY**  
**Page 2 of 2**

On today's date I heard from people who have not yet received the EIS, even though they requested it prior to the December 10 and 11 public hearings. The January 4, 2002 deadline to respond to the EIS is too short. As a property owner near Trapp in Clark County, I am requesting that residents and concerned citizens be given the opportunity to be informed about this proposed project.

Sincerely,



Lisa P. Collins  
2344 Harrodsburg Rd.  
Lexington, KY 40503

1/21  
(cont.)

Collins, Lisa P.  
Lexington, KY  
Page 1 of 7



**Kentucky Pioneer Integrated Gasification  
Combined Cycle Demonstration Project  
Draft Environmental Impact Statement  
U.S. Department of Energy  
National Energy Technology Laboratory**

**Written Comment Form**

*Must be received by January 4, 2002.*

December 27, 2001

Dear Mr. Spears:

Please see the attached sheets for written comments.

Sincerely,

*Lisa P. Collins*

Lisa P. Collins  
2344 Harrodsburg Rd.  
Lexington, KY 40503

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Roy Spears  
U.S. Department of Energy  
National Energy Technology Laboratory  
3610 Collins Ferry Road  
Morgantown, WV 26507-0880

Comment forms may be faxed to:  
Mr. Roy Spears  
(304) 285-4403

**Collins, Lisa P.**  
**Lexington, KY**  
**Page 2 of 7**

Kentucky Pioneer Integrated Gasification  
 Combined Cycle Demonstration Project  
 Draft Environmental Impact Statement  
 U.S. Department of Energy  
 National Energy Technology Laboratory

Written Comment Form

The Kentucky Pioneer Integrated Gasification Combined Cycle Demonstration Project should not be constructed near Trapp in Clark County, Kentucky for the following reasons:

1. Kentucky Highway 89, the only artery to the proposed site, is not adequate to carry 500-830 vehicle trips *per shift change* and 40-60 heavy-duty truck trips per day. The road is old and narrow, and many stretches lack adequate shoulders. School children enter and exit school buses all along this route. This project puts school children and area residents at serious risk that cannot be ignored. Carpooling and a turn lane at the proposed site's entrance are not adequate solutions.
2. This is an experimental project. There is no firm evidence that the vitrified frit will not be hazardous. If it is hazardous, the frit can be held at the proposed site for 90 days, increasing risk to area residents in the form of air, soil, and water pollution.
3. The Commonwealth of Kentucky does not need the power that would be generated by the proposed project. The state will be adversely affected by price hikes and blackouts from an excess of electricity. Kentucky's electricity rates are currently low; merchant power could make rates increase.
4. Very little has been said about the Red River, which is 1.5 miles from the proposed project. This river, part of which has been designated a National Wild and Scenic River, adds to the unique cultural and historical significance of Clark, Madison, and Estill counties where the three counties meet near the confluence of the Red River and the Kentucky River. This area is extremely close to the proposed project. This plant will wholly compromise the aesthetic quality of the Red and Kentucky Rivers, in an area where real Kentucky pioneers explored and settled the country.
5. According to the EIS, the gasifier facility stacks and plumes would likely be visible from the City of Winchester, the community of Trapp, and the Pilot Knob State Nature Preservation. What possible sense does it make for a county as scenic as Clark County, as well as the adjacent areas of Madison and Estill Counties, to be marred by stacks and plumes in generating power the Bluegrass State does not need?
6. The Kentucky River has been compromised for many years, an example being the nearby Boonesborough Beach, which has been closed to swimmers for many years.

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 5/04  
 6/03  
 7/04  
 8/07

**Comment No. 1**

**Issue Code: 10**

Comment noted. Impacts to traffic levels along Kentucky Highway 89 are addressed in Section 5.11 of the EIS, Traffic and Transportation. As stated, during construction, 500 to 1,000 vehicle trips would occur along Kentucky Highway 89 at the beginning and end of the construction workday. The exact number would depend on the staffing levels required onsite. Construction schedules typically call for workers to be onsite relatively early in the morning, thus avoiding morning schoolbus traffic, until the early afternoon. The Transportation Division of the Clark County School Board indicates that schoolbuses utilize Kentucky Highway 89 when construction workers would be leaving the site. Section 5.11, Traffic and Transportation, has been modified to reflect the impacts of the extra vehicles on schoolbus routes.

The trucks would haul a maximum of 18 metric tons (20 tons) of cargo each, which would place the overall weight below the Kentucky-mandated maximum for Kentucky Highway 89 of 36,288 kilograms (80,000 pounds) for a five-axle vehicle. The Kentucky Transportation Cabinet indicated any vehicle below that weight traveling along that road would not be expected to cause damage to the roadway. Should damage occur from vehicles carrying more than the maximum weight allowance, the operator of the trucks, in this case KPE, would be responsible for any repairs to the road surface. Section 5.11, Traffic and Transportation, has been modified to address the concerns of damage to the local roads.

**Comment No. 2**

**Issue Code: 12**

Comment noted. Analysis of frit from gasification processes has shown that the frit is nonhazardous and rarely fails the TCLP for metals. Vitrified frit is expected to meet the more stringent Universal Treatment Standard criteria of the U.S. Environmental Protection Agency (EPA)-TCLP. There is no risk to residents from frit since all its constituents are immobilized in a glassy matrix which is resistant to corrosion in the environment and nonleachable by EPA standards. Vitrified frit is a commercial product and not a waste, therefore, it is expected to be marketable.

Collins, Lisa P.  
Lexington, KY  
Page 3 of 7

Efforts to clean up the river are slow but constant. This proposed project is a step back in the environmental healing process of the river and will further compromise both the Kentucky and the Red rivers, since the Kentucky seasonally backs into the Red. Is it sensible to make a sick river sicker with a power plant that the state does not need? Kentuckians do want the Kentucky River to be environmentally sound and are working towards that goal.

7. Transporting over 4,000 tons of municipal waste from New York and New Jersey to Kentucky *daily* to generate merchant power is an unwieldy plan. Why can't the power plant be built in New York or New Jersey?

8. As a property owner near Trapp, I am extremely concerned about air, soil, and water pollution. The horrific results of the facilities in Paducah and Maxey Flats do not instill trust into this project, regardless of how much federal and state monitoring might take place. Don't put this risk in Trapp.

9. The community has not been informed as to the route the power transmission lines will take to Montgomery County. This is another unknown that will adversely affect the aesthetic and historical nature of the area. It is another aspect of this project that will unfairly blindside area residents later on.

10. The draft EIS does not come close to adequately addressing issues of culture, history, aesthetics. Trapp and much of Clark County, as well as most of neighboring Estill and Madison counties, are rural areas that heretofore have been largely saved from modern threats such as this one. Kentucky is a farming state, with a history of real pioneers in the area of the proposed plant. Putting the proposed plant at Trapp will change the lives of these people in too many negative ways. These people, with their history and culture were here before this plant; the plant should not be an interloper into this community and area.

Finally, I protest the manner in which the December 2001 public hearings were advertised and conducted, and the length of time between the meetings and the deadline for the written comments.

First, advertisement was too little and too few. Radio and television stations are required to carry a minimum number of public service announcements free of charge; there is no justification for electronic media not being informed by the U.S. Department of Energy about the public hearings. Advertisement in the Lexington, Louisville, and Winchester newspapers was not enough. This project is extremely close to the historic College Hill area of Madison County and close to Estill County. Extensive display advertisement, *not classified advertisement*, should have occurred in all of these counties, as well as other counties contiguous to Clark County. Residents of Clark County were given little notice; residents of several contiguous counties were given zero notice, even though issues of pollution and aesthetic compromises affect residents there as well. Could it be that the attitude of the U.S. Department of Energy and Global Energy, Inc. is that Kentuckians are

8/07  
(cont.)

9/16

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12/07

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(cont.)

16/03  
17/04

16/03  
(cont.)

18/21

19/03

**Comment No. 3**

**Issue Code: 14**

Chapter 2 of the EIS discusses EKPC's 1998 Power Requirements Study. The study indicates that the electrical load for the region is expected to increase by 3.0 percent per year through 2017. Net winter peak demand is expected to increase by 3.3 percent per year and net summer peak demand is expected to increase by 3.0 percent per year. Peak demand is projected to increase from 2,031 megawatts (MW) in 1998 to 2,394 MW in 2003 and 3,478 MW in 2015. Based on this load growth, EKPC will need additional power supply resources of 625 MW in 2003. The need is further shown by EKPC's plans to construct four new combustion turbine (CT) electric generating units to provide peaking service alongside the three existing peaker CTs at the J.K. Smith Site.

**Comment No. 4**

**Issue Code: 07**

The proposed plant is located 2.4 kilometers (1.5 miles) downstream of the confluence of the Kentucky River and the Red River. The distance between the confluence of the rivers and the discharge point and the fact that the confluence is upstream make the chance of any discharges backing up into the Red River remote. Therefore, no impacts to the Red River would be expected.

**Comment No. 5**

**Issue Code: 04**

Comment noted. Due to the hilly terrain of the area and the distance of the Red River from the project site, the facility stacks from the gasification island would not be visible from the Red River.

**Comment No. 6**

**Issue Code: 03**

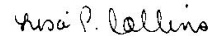
Concurrent with the EIS process and prior to committing federal funds or granting a license or permit for this undertaking, DOE is responsible for considering the impacts of its actions on cultural resources. Consultation with the Kentucky Heritage Council and State Historic Preservation Officer (SHPO) has determined that there is no effect on historic properties from this project.

**Collins, Lisa P.**  
**Lexington, KY**  
**Page 4 of 7**

not bright enough to notice or care about the impact this project would have on their way of life?

Second, concerned citizens have been given from December 12 to January 4 to respond to the Draft EIS. This is an unreasonable length of time at any time of the year, but has been further compounded because this particular season is when students are finishing a school term and families are involved in significant holidays and the events that surround them. Who chose this unfair timeline at this time of the year? Again, was the thinking that Kentuckians would not notice or care? The manner in which the public hearings have taken place has done nothing to bolster confidence in this project.

Sincerely,



Lisa P. Collins  
2344 Harrodsburg Rd.  
Lexington, KY 40503

20/21

**Comment No. 6 (cont.)**

**Issue Code: 03**

Chapters 4 and 5 have been revised to include the findings of the Section 106 Review process.

**Comment No. 7**

**Issue Code: 04**

Comment noted. Impacts to the aesthetic and scenic environment of the project area are presented in Section 5.5, Aesthetic and Scenic Resources, of the EIS. Because of DOE's limited role of providing cost-shared funding for the proposed Kentucky Pioneer IGCC Demonstration Project, alternative sites were not considered.

**Comment No. 8**

**Issue Code: 07**

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 KPDES permit. These limitations would be established based on site-specific computer modeling of the 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 protect existing water quality.

**Comment No. 9**

**Issue Code: 16**

Because of DOE's limited role of providing cost-shared funding for the proposed Kentucky Pioneer IGCC Demonstration Project, alternative sites were not considered. KPE selected the existing J.K. Smith Site because the costs would be much higher and the environmental impacts would likely be greater if an undisturbed area were chosen.

Collins, Lisa P.  
Lexington, KY  
Page 5 of 7

**Comment No. 10** **Issue Code: 06**  
Comment noted. Hazardous waste clean-up activities at both the nuclear waste disposal site at Maxey Flats and the DOE gas diffusion plant at Paducah have no association with the proposed Kentucky Pioneer IGCC Demonstration Project. The activities and technologies used at the Maxey Flats and Paducah sites have nothing in common with the proposed Kentucky Pioneer IGCC Demonstration Project facility.

**Comment No. 11** **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 soil quality would be expected from operation of the plant.

**Comment No. 12** **Issue Code: 07**  
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 KPDES permit. These limitations would be established based on site-specific computer modeling of the 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 protect existing water quality.

The primary issues with the facilities in Maxey Flats and Paducah involved historic releases of radioactive materials; there would be no radioactive materials associated with the proposed plant.

**Comment No. 13** **Issue Code: 21**  
Pursuant to Rural Utility Service (RUS) NEPA regulations, a NEPA document would be prepared that would address the impacts from the transmission line. Information in that NEPA document will be used to assure impacts are avoided and solutions integrated to avoid adverse public and environmental impacts.



Collins, Lisa P.  
Lexington, KY  
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**Comment No. 14** **Issue Code: 04**  
Comment noted. All visual and aesthetic impacts from the transmission line will be addressed in a NEPA document that would be prepared according to RUS NEPA regulations. Information in the document will be used to assure impacts are avoided and solutions integrated to refrain from adverse public and environmental impacts.

**Comment No. 15** **Issue Code: 03**  
The transmission line would be constructed as part of both No Action Alternative 2 and the Proposed Action and would be subject to Section 106 Review as an undertaking, as defined by the *National Historic Preservation Act*. The route of the transmission line has not yet been determined and a cultural resource identification effort has not been defined. The cultural resource identification would likely include a pedestrian survey for archaeological resources and an assessment of the potential for visual impacts to the setting of any nearby cultural resources. Impacts to cultural resources from the transmission line will be evaluated in a NEPA document that will be prepared under RUS NEPA regulations.

**Comment No. 16** **Issue Code: 03**  
The EIS provides a summary of the cultural resource work that has been conducted on the proposed demonstration project site. Chapters 4 and 5 have been updated to show the findings of the completed Section 106 Review process. The Kentucky SHPO has found that there is no effect on historic properties from this project.

**Comment No. 17** **Issue Code: 04**  
Comment noted. DOE believes that the EIS adequately addresses all impacts to visual and aesthetic resources in the project vicinity. Impacts to the environment of the project area are presented in Section 5.5, Aesthetic and Scenic Resources, of the EIS.

**Collins, Lisa P.**  
**Lexington, KY**  
**Page 7 of 7**

**Comment No. 18**

**Issue Code: 21**

The public hearing dates, times, and locations were announced in the *Federal Register*, in local newspapers, *The Winchester Sun* and *The Lexington Herald - Leader*, and in public service announcements. The comment period was extended through January 25, 2002. The Final EIS will be distributed to elected officials and any interested parties in neighboring counties. All requirements in state and federal laws, rules, and regulations regarding announcements for public hearings were satisfied or surpassed.

**Comment No. 19**

**Issue Code: 03**

The Section 106 Review process has been completed. The Kentucky SHPO has issued a finding of no effect on historic resources from this project.

**Comment No. 20**

**Issue Code: 21**

The comment period was extended through January 25, 2002.

Collins, Thomas N.  
Paris, KY  
Page 1 of 5

①



Kentucky Pioneer Integrated Gasification  
Combined Cycle Demonstration Project  
Draft Environmental Impact Statement  
U.S. Department of Energy  
National Energy Technology Laboratory

Written Comment Form  
Must be received by January 4, 2002.

Dear Mr Spears,  
I am writing you to express  
my concerns about the proposed  
gasification project.  
The first thought that comes  
to mind is, if gasification of  
solid waste is such a good idea  
and will provide so many benefits  
to Kentucky, then why doesn't  
New Jersey keep and gasify  
their own waste? 'till not the  
pollution generated by ground  
transportation across multi states  
add to the green-house effect and

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Roy Spears  
U.S. Department of Energy  
National Energy Technology Laboratory  
3610 Collins Ferry Road  
Morgantown, WV 26507-0880

Comment forms may be faxed to:  
Mr. Roy Spears  
(304) 285-4403

(over)

**Comment No. 1**

**Issue Code: 16**

Because of DOE's limited role in providing cost-shared funding for the proposed Kentucky Pioneer IGCC Demonstration Project, and because of advantages associated with the proposed location, DOE did not evaluate alternative sites for the proposed project. Site selection was governed primarily by benefits that Global Energy could realize. Global Energy preferred the proposed project site because the costs would be much higher and the environmental impacts likely much greater for an undisturbed area.

This project was first selected in 1993, with Duke Energy as the participant in partnership with an east coast utility. However, for various reasons, the siting for the project was changed to a site in Illinois. In 1999, Global Energy approached Duke and requested to take over the project. KPE, a subsidiary of Global Energy, entered into a power purchase agreement with East Kentucky Power Cooperative (EKPC) to buy the power from the Kentucky Pioneer facility. Because the current proposed site for the project would provide for demonstration of the BGL technology, and the power purchase agreement between KPE and EKPC would allow KPE to meet their repayment agreement with DOE, the partnership was found acceptable.

1/16

2/06

**Comment No. 2**

**Issue Code: 06**

Comment noted. Rail transport is the most economical and energy-efficient transportation method available for this project for fuel materials and marketable byproducts generated by the gasification process. Emissions per ton per mile for material transported by rail would be substantially less than comparable emissions associated with truck transport. Rail transport is clearly the preferred method for fuel materials and shipment of vitrified frit. Customers for sulfur produced by the sulfur recovery facility would determine whether shipment of that material is by rail or truck. All air impacts, including a discussion of greenhouse gas emissions and acid rain effects, are presented in Section 5.7, Air Resources, of the EIS.

Collins, Thomas N.  
Paris, KY  
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②

also acid rain that already  
plagues the Eastern United States?  
What is the environmental impact  
in New Jersey - that changes when  
the vast amounts of solid waste  
arrives in Kentucky?

As a Kentuckian, I have watched  
outside interests use this state  
for their own gain at our loss  
for years - I am thinking about  
strip mining. I have lived and  
worked in Kentucky all my life  
with the only time away from  
home a four year stint in the  
U.S. Navy. I have seen 3/4  
of the rest of the world and  
I have not found any place  
better. Though I do not live  
in the immediate area of the  
proposed project, (30 miles away)  
I have fished, boated and  
camped at the confluence

**Comment No. 3**

**Issue Code:22**

Comment noted. Reduced impacts as a result of removing the RDF from the manufacturer site is beyond the scope of this EIS.

2/06  
(cont.)

**Comment No. 4**

**Issue Code:22**

Comment noted. The power generated by the Kentucky Pioneer IGCC Demonstration Project will be used within Kentucky.

3/22

4/22

Collins, Thomas N.  
Paris, KY  
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3



Kentucky Pioneer Integrated Gasification  
Combined Cycle Demonstration Project  
Draft Environmental Impact Statement  
U.S. Department of Energy  
National Energy Technology Laboratory

**Written Comment Form**  
Must be received by January 4, 2002.

of the Red River and the Kentucky  
River for twenty years. The fishing  
stories I could tell you, the wild  
life I have seen, the times  
of peace and tranquility I  
have spent there can have no  
monetary value placed on them.  
The solitude of this area is very  
remarkable given its close proximity  
to a large metropolitan population.  
Other questions that I have  
include, what will be the traffic  
impact on highway 89 during construction.  
This road is very busy during the  
work week and school buses run

Comment forms may be mailed to:  
Mr. Roy Spears  
U.S. Department of Energy  
National Energy Technology Laboratory  
3610 Collins Ferry Road  
Morgantown, WV 26507-0880

Comment forms may be faxed to:  
Mr. Roy Spears  
(304) 285-4403

Please use other side if more space is needed.

**Comment No. 5**

**Issue Code: 10**

Comment noted. Impacts to traffic levels along Kentucky Highway 89 are addressed in Section 5.11, Traffic and Transportation. As stated, during construction, 500 to 1,000 vehicle trips would occur along Kentucky Highway 89 at the beginning and end of the construction workday. The exact number would depend on the staffing levels required onsite. Construction schedules typically call for workers to be onsite relatively early in the morning to avoid morning schoolbus traffic, until early afternoon. The Transportation Division of the Clark County School Board indicates that schoolbuses utilize Kentucky Highway 89 when construction workers would be leaving the site. Section 5.11, Traffic and Transportation, has been modified to reflect the impacts of added vehicles on schoolbus usage.

4/22  
(cont.)

The trucks would haul a maximum of 18 metric tons (20 tons) of cargo each, which would place the overall weight below the Kentucky-mandated maximum weight for Highway 89 of 36,288 kilograms (80,000 pounds) for a five-axle vehicle. The Kentucky Transportation Cabinet indicated any vehicle below that weight traveling along that road would not be expected to cause damage to the roadway. Should damage occur from vehicles carrying more than the maximum weight allowance, the operator of the truck, in this case KPE, would be responsible for any repairs to the road surface. Section 5.11, Traffic and Transportation, has been modified to address the concerns of damage to the local roads.

5/10

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Paris, KY  
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(4)

up and down the road most of the year. Highway 89 is not a safe road at the best of times. What is the constitution of the waste pellets going to be? What is the quality control going to consist of? We are talking years and years of shipping with no assurance of stable regulation resources. If heavy metals, mercury PCB's - who knows what slips through, the damage is done.

On the surface, it seems this project is being pushed through under the radar of the public eye. The limited availability of the environmental impact statement, the short and limited notification of the public and lack of placement of documents in the Clark County Court<sup>h</sup> library, whether through oversight or intentionally, remains a fact.

Give this project a little breathing-

**Comment No. 6**

**Issue Code: 16**

Chapter 3, Section 3.2.2.2, discusses the production and composition of the RDF pellets.

5/10  
(cont.)

**Comment No. 7**

**Issue Code: 21**

The Final PSD/Title V Air Permit, issued by the Kentucky Division for Air Quality on June 7, 2001, requires continuous emissions monitors for NO<sub>x</sub>, SO<sub>x</sub>, CO, O<sub>2</sub>, and PM<sub>10</sub>. Annual stack tests for all pollutants with emission limits established by the permit are also required. The KPDES permit, which will be obtained at least 180 days prior to the commencement of construction, will also have effluent limits and monitoring requirements established by state regulations. Along with the required monitoring under the permit, KPE would also monitor the levels of biological and chemical oxygen demand, pH, and temperature in any wastewater generated by the facility. Any monitoring and measurements would be based on usage limits and flows associated with natural gas-fired plants.

6/16

7/21

8/12

9/21

**Comment No. 8**

**Issue Code: 12**

The major criteria pollutant emissions and hazardous air pollutant emissions associated with the proposed project are identified in Tables 5.7-1 and 5.7-2 of the EIS. No polychlorinated biphenyls (PCBs) are generated from the proposed project.

10/16

Heavy metals emissions from the proposed facility are estimated to be 4.68 metric tons (5.16 tons) per year, or 93.6 metric tons (103.2 tons) over 20 years. Based on a very conservative screening analysis of heavy metals deposition, the resulting heavy metal deposition rate would be an average of 0.0375 kilograms per hectare (0.0335 pounds per acre) per year, or 37.5 grams per acre (0.54 ounces per acre) per year. Over a total of 20 years, the cumulative deposition of heavy metals would total an average of 0.75 kilograms per hectare (0.67

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③



Kentucky Pioneer Integrated Gasification  
Combined Cycle Demonstration Project  
Draft Environmental Impact Statement  
U.S. Department of Energy  
National Energy Technology Laboratory

**Written Comment Form**  
*Must be received by January 4, 2002.*

room. Six months or a year post-plant  
is nothing compared to the  
decades this plant will be in place  
and operating. This and future  
generations will thank you.

yours,  
Thomas M. Collins  
Thomas M. Collins  
320 Springhill Drive  
Paris, Kentucky 40361

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Roy Spears  
U.S. Department of Energy  
National Energy Technology Laboratory  
3610 Collins Ferry Road  
Morgantown, WV 26507-0880

Comment forms may be faxed to:  
Mr. Roy Spears  
(304) 285-4403

**Comment No. 8 (cont.)**

**Issue Code: 12**

pounds per acre), or 756.6 grams per hectare (10.7 ounces per acre). That quantity does not indicate any significant impacts from heavy metal deposition downwind of the proposed project.

**Comment No. 9**

**Issue Code: 21**

The Draft EIS is available to anyone who requests a copy. Additionally, copies are available in the project reading rooms at Trapp Elementary School and Clark County Public Library, as well as the Lexington Public Library.

10/16  
(cont.)

**Comment No. 10**

**Issue Code: 16**

Comment noted. The NEPA process is designed to allow for adequate time to review and comment on NEPA documents. DOE believes the schedule for the Kentucky Pioneer IGCC Demonstration Project is sufficient to account for public comments and review. The public comment period was extended to January 25, 2002. DOE will consider all public comments before issuing the ROD. The ROD will be issued no sooner than 30 days after the Final EIS is distributed and a notice of availability is issued.

Commonwealth of Kentucky House of Representatives  
State Representative Mr. Don Pasley  
Frankfort, KY  
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## Commonwealth of Kentucky

HOUSE OF REPRESENTATIVES

DON PASLEY  
State Representative  
5805 Ecton Road  
Winchester, Kentucky 40391  
(859) 842-3337



STATE CAPITOL ANNEX  
Room 351E  
Frankfort, Kentucky 40601  
(502) 564-8100, Ext.630

73rd LEGISLATIVE DISTRICT  
January 9, 2002

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

Dear Mr. Spears:

Thank you for extending the time for taking public comment on the Draft Environmental Impact Statement regarding the Kentucky Pioneer Demonstration Project in Clark County, Kentucky.

Many of my constituents have expressed their concern about the project. Some have said that they are inclined to support the demonstration plant. I, myself, continue to study the implications of the project.

For your consideration and for inclusion into the record on this project, I submit the enclosed documents which reflect the concerns of some of Clark County's citizens. Please give these comments careful consideration. Thank you.

Sincerely,



Don Pasley  
State Representative

DP:cs  
Enclosures



**Commonwealth of Kentucky House of Representatives  
State Representative Mr. Don Pasley  
Frankfort, KY  
Page 2 of 21**

Please accept the following comments on the Draft Environmental Impact Statement regarding the Kentucky Pioneer Demonstration Project in Clark County, Kentucky:

1. Kentucky and Clark County will bear a disproportionate share of the burden created by a national energy policy which emphasizes coal use. If the technology fails, and there is no proof the technology will work as promised, the impacts will be borne by the citizens of Clark County. If the power created by this project is used outside of Kentucky, those burdens will be borne in Kentucky with no corresponding benefit.
2. Some citizens of Clark County fear a bait-and-switch by the operators. The DEIS states "Global Energy, Inc., will not begin detailed design of the proposed project, including layout and flow sheet information, until the project financing is finalized." It thus appears that the DEIS may not accurately reflect the impacts that may be caused by the final design and operation of the project.
3. The Environmental Report for the projected 17 mile transmission line should be conducted simultaneously with this DEIS. The public should be given a picture of the impacts from the whole project. The project is valueless without a connection to the transmission grid. Therefore, the impacts of building the 17 mile power line should be considered simultaneously with the analysis of the project itself and not afterward.
4. Federal policy should not provide incentives for states to avoid their responsibility to provide within their own borders for the proper management of municipal solid waste. The federal funding for this demonstration project allows New Jersey and New York to continue to export their solid waste and in doing so to export the land, air, and water protection challenges that come with MSW disposal. The federal grant should include financial protections for Clark County from the consequences of failure of the technology or of the operator walking away from problems that might arise from bringing in large quantities of northeastern solid waste.
5. The DEIS fails to fully consider the environmental impacts on Clark County if the operator does not acquire the RDF pellets from a single supplier nor consider the impacts if the anticipated supplier significantly changes its source of MSW. The DEIS states only that such changes may result in a "slight change in the resulting waste stream". However, there is no analysis of how changes in the sources of RDF can affect wastes generated by the project.
6. On December 17, 2001, the Kentucky Natural Resources and Environmental Protection Cabinet issued a report on the cumulative environmental impacts of electric generating plants. The findings of this report must now be considered for purposes of this DEIS. For example, the state report notes that wastewater discharges from power plants may contain arsenic at levels above the

**Comment No. 1** **Issue Code: 22**  
 The Kentucky Pioneer IGCC Demonstration Project is intended to demonstrate a power generation system with the potential to produce clean energy from high-sulfur coal while extending the life of domestic coal reserves. Since it is the first demonstration of this technology some risks will be associated with the project. Chapter 3 of the EIS has been revised to discuss financial risks in more detail. Potential environmental impacts are discussed in Chapter 5 of the EIS.

**Comment No. 2** **Issue Code: 16**  
 The Kentucky Pioneer IGCC Demonstration Project was selected for further consideration under DOE's fifth solicitation(CCT-V) of the Clean Coal Technology (CCT) Program. DOE concludes that the project falls under CCT Program requirements due to the use of the first co-fed BGL technology. The purpose of the CCT Program is to demonstrate the efficiency and performance of new technologies. The power generated by the project will be used to support Kentucky's energy needs.

**Comment No. 3** **Issue Code: 16**  
 Though final design has yet to be completed, conceptual design information is sufficient to enable adequate environmental impact analysis. DOE believes the full scope of environmental impacts from the construction and operation of the proposed project are sufficiently addressed in the EIS.

The EIS is intended to be used as a planning tool that analyzes the environmental impacts from a proposed project. DOE will consider the document and public comments in making the decision of whether or not to proceed with the project.

Commonwealth of Kentucky House of Representatives  
State Representative Mr. Don Pasley  
Frankfort, KY  
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maximum contaminant levels considered safe for drinking water. The proposed project will discharge wastewater into the Kentucky River at a point up river from a drinking water intake. This impact, as well as others in the Cabinet report, must be accounted for in the DEIS.

8/07  
(cont)  
7/20  
(cont.)

**Comment No. 4**

**Issue Code: 16**

The EIS examined all potential impacts associated with the transmission line through a general analysis. Further studies of the impacts of the transmission line are addressed in an Environmental Report (ER) being prepared under RUS NEPA regulations. Information in the ER will be used to assure impacts are avoided and solutions integrated to avoid adverse public and environmental impacts.

**Comment No. 5**

**Issue Code: 22**

DOE does not believe that this project provides incentives for states to avoid their responsibility with regard to waste management issues. Rather, DOE believes that this project provides an opportunity to extend the life of domestic coal reserves. The RDF that would be imported to Kentucky is a feedstock for the facility and is not municipal solid waste (MSW) or solid waste. The federal grant cannot include financial protections for Clark County from the consequences of failure of the technology or of the operator walking away from the project. Any financial protection should be pursued through local legislatures during ordinance reviews. KPE is committed to providing power from the plant to EKPC for 20 years. Since the project would be the first demonstration of this technology, there are financial risks associated with it. Those risks are discussed in more detail in Chapter 3 of the EIS.

**Comment No. 6**

**Issue Code: 14**

As discussed in Chapter 3 of the EIS, 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.

**Commonwealth of Kentucky House of Representatives  
State Representative Mr. Don Pasley  
Frankfort, KY  
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To: Kentucky State Representative, Donald pasley  
Fr: John Maruskin, Adult Services Librarian, Clark County Public Library  
Re: Kentucky Pioneer Electricity Plant

December 28, 2001

Tommy Rector asked me to put together a list of concerns about the proposed Kentucky Pioneer Integrated Gasification plant to be built near Trapp, KY.

1. The environmental impacts are dangerous. All new power plants should be running on cleaner fuel. High sulfur coal and unregulated municipal waste are too hazardous.
2. The impact of this system on the Kentucky River could be disastrous. This plant will extract and consumes huge amounts of Kentucky River water. In a drought situation the effects on drinking water supplies would be bad for all of Central Kentucky.
3. There is no economic benefit from this plant to Clark County. Only Global Electric (the plant's parent company) will benefit. Of the 124 jobs that will be created from this plant only 24 will be in Clark County. The majority will be executive jobs created for Global in Cincinnati.
4. That this plant will be licensed in such a way that it is able to circumvent local solid waste plans is a political atrocity that completely undermines the intent of SB 2, the law that gives local governments the right to set their own environmental quality standards. This irks me the most. State government is undermining laws passed to protect citizens from these situations.
5. I am enclosing a "Technological Concept Evaluation" that shows that the process to be used at Trapp is also being considered as a way to dispose of nerve gas weapons. With this process available in Trapp, and with local control of fuel up to the discretion of the owning company, we could really be looking at a situation in which Clark County would not only be the nerve gas incinerator for the Madison County reserves, but for other, out of state nerve gas reserves. THIS WOULD BE VERY BAD.
6. Please refer to the article I've enclosed entitled "New power plants pose pollution challenge." On the bottom of the second page you will read that Governor Patton has told the PSC that he will present a package of legislation dealing with power plants in 2002. That legislation will make merchant power plants subject to local zoning and planning ordinances. BUT IT WILL BE TOO LATE FOR CLARK COUNTY IF WE DO NOT STOP THIS PLANT, NOW.

If you have any question about these concerns, please feel free to call be at the Library 859-744-5661. I cannot tell you how much it means to us to have your interest in this issue. Thank you for your help.

**Comment No. 7**

**Issue Code: 20**

The *Cumulative Assessment of the Environmental Impacts Caused by Kentucky Electric Generating Units* Report issued by the Kentucky Natural Resources and Environmental Protection Cabinet on December 17, 2001, has been reviewed. Relevant sections of the EIS, including Section 5.14, Cumulative Impacts, have been updated to reflect issues presented by the report.

**Comment No. 8**

**Issue Code: 07**

9/16  
10/16  
11/07  
12/02  
13/21  
14/22

As stated in Section 5.8, 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, including thermal limits, 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 KPDES permit. These limitations would be established based on site-specific computer modeling of the 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 protect existing water quality.

15/21

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

Commonwealth of Kentucky House of Representatives  
State Representative Mr. Don Pasley  
Frankfort, KY  
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Technology No. 17

July 17, 2000

## TECHNOLOGY CONCEPT EVALUATION

## TOXIPLEX Process for Destruction of Chemical Agents

## 1. Technology Overview

The TOXIPLEX Process, developed by Dynecology of Harrison, NY, is proposed for destruction of chemical agents [1]. The process is not designed for high salt aqueous feeds and therefore would not be appropriate for the destruction of hydrolysate or neutralents [11]. The process employs a slagging, fixed bed gasifier (British Gas/Lurgi) to destroy organic compounds at 3000°F (1650°C) and requires a treatment system to clean the product gas containing particulate aerosols and gaseous contaminants. The off-gas cleanup system generates a waste that will require disposal. The cleaned product gas consists primarily of hydrogen and carbon monoxide and can be used as a fuel for commercial boilers or for advanced gas turbines. The residual solid waste leaving the bottom of the gasifier is a slag that is converted into a vitreous frit.

The gasifier used in the TOXIPLEX process may be considered a "boiler"; however, from a regulatory perspective it may also be considered an "industrial furnace". It is not considered an "Incinerator" based on the definition of "Incinerator" in 40CFR260.1. This technology was originally developed for producing fuel gas.

The information available for this review was evaluated relative to the application of the TOXIPLEX concept to the destruction of chemical agents. Site specific information required to assess implementation, such as requirements for systems interface, construction, permitting, schedule, demonstration and testing, etc., was not available in the information reviewed. This evaluation incorporates the comments on this process in the letter from J. Bacon (PMCD) to H. Schulz (Dynecology), dated December 22, 1997 [8].

## 2. Process Description

As shown in Figure 1 [1], the Lurgi gasifier is a cylindrical vessel in which carbonaceous material (coke) and limestone (as a fluxing agent) are fed through the top of the gasifier. A slag is removed from the bottom as a vitrified frit by quenching the slag with water. The organic feed (e.g., chemical agent) is introduced into a partial oxidation zone near the bottom of the gasifier through the oxygen and steam inlet tuyere. (The liquid form of the agent fits well with the feed requirements of the gasifier and no further preparation is considered necessary.) The product gas, which is partially oxidized, consists predominately of CO, H<sub>2</sub>, CH<sub>4</sub>, CO<sub>2</sub> and compounds such as H<sub>2</sub>S, HCl, and others, depending on the elemental composition of the feed.

The organic feed is in contact with the partial oxidation zone for 50-100 milliseconds in the lower region of the gasifier. The temperature of the partial oxidation zone is controlled at 3000°F by regulating the oxygen to steam ratio to balance the exothermic partial oxidation of carbon with the endothermic water gas reaction. Upon leaving the partial oxidation zone, the reaction

"This document was prepared under contract with the United States Army for the sole purpose of evaluating the identified technology for potential application in the United States Army Chemical Demilitarization Program (CDP), based on information available to the reviewer at the time of the evaluation. Any opinions, findings, recommendations or conclusions expressed are stated in the context of the particular considerations of the CDP, and are not intended for use or reference in any way by any other party for any other purpose."

Stone &amp; Webster Engineering Corporation

1/12

**Comment No. 8 (cont.)****Issue Code: 07**

concerning drinking water quality. Therefore, no impacts to drinking water are expected.

**Comment No. 9****Issue Code: 16**

Comment noted. The purpose of this project is to demonstrate a technology with the potential to generate clean and safe energy from high-sulfur coal.

**Comment No. 10****Issue Code: 16**

DOE selected the Kentucky Pioneer IGCC Demonstration Project for further consideration under DOE's fifth solicitation (CCT-V) of the CCT Program and concludes that the project falls under the CCT Program requirements due to the use of the modified version of the BGL technology. The purpose of the CCT Program is to demonstrate technologies with the potential to provide cleaner and more efficient energy from coal resources. All coal and RDF pellets will be transported in covered containers. The concrete-floored storage building for the RDF pellets and coal will be located within the 4.8-hectare (12-acre) project site and would be capable of housing a 10-day supply of coal and RDF pellets. The 4.8-hectare (12-acre) project site is located within the larger 1,263-hectare (3,120-acre) J.K. Smith Site and is approximately 1.6 kilometers (1.0 mile) from the closest residence.

14/22  
(cont.)**Comment No. 11****Issue Code: 07**

As stated in Section 5.8, Water Resources and Water Quality, the Proposed Action would withdraw a total of 15.1 million liters per day (MLD) (4 million gallons per day [MGD]) of water from the Kentucky River. This is equivalent to 0.1 percent of average flow conditions and 4.0 percent of low-flow conditions. Should drought conditions warrant or the state mandate it, KPE would cease withdrawals from the river and shut down the plant temporarily.

Commonwealth of Kentucky House of Representatives  
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Technology No. 17

July 17, 2000

products then come in contact with an incandescent bed of coke (for one or more seconds) in the upper region of the gasifier (a highly reducing environment) where complete pyrolysis is achieved.

The product gas exiting the top of the gasifier is scrubbed free of contaminants such as H<sub>2</sub>S, NH<sub>3</sub>, and HCl. The product gas is a medium BTU fuel gas (300 BTU/ft<sup>3</sup>), which can be substituted for natural gas in commercial boilers or as fuel for the advanced gas turbines of an integrated gasification, combined cycle power plant. All feed material that is not gasified is continuously withdrawn from the base of the gasifier as a molten slag. The slag is then fritted by quenching in water.

Figure 2 [1] provides a process flow schematic of the gasifier and gaseous effluent cleaning system. A mass balance is shown in Figure 3 [1] (based on a chemical agent feed of 11 tons per day). The mass balance of solid waste exiting from the gasifier is primarily dependent on the ash characteristics of the carbonaceous fuel used rather than the agent or toxic material destroyed. Dyncology has stated that in order to substantially reduce the solid waste exiting the gasifier and virtually eliminate any concerns related to heavy metals in the mass balance, refractory oxide packing may be used instead of coke to provide surface area for reaction. In this case, supplemental fuel will be required to ensure the desired reaction conditions are attained. The process produces a medium BTU product gas that provides a readily available source for this supplemental fuel [1].

3. Process Efficacy

3.1 Maturity of Technology

Gasification has been in commercial operation for many years. Lurgi has over 170 Gasification plants in operation including various downstream processes for gas clean-up, sulfur recovery and waste water treatment. These gasification reactors are of dry bottom design, meaning that the slag is removed in dry form in contrast to the slagging gasifier where melted slag is quenched with water to make a non-leachable frit for disposal purposes. British Gas and Lurgi developed a slagging gasifier design that was built and operated in Westfield, Scotland to produce synthesis gas [9]. British Gas discontinued its gasification efforts after natural gas was found in the North Sea.

The basic gasifier and auxiliary equipment are readily available, although they would have to be designed for site specific CWM application and integration with the plant site.

3.2 Process Monitoring and Control

The controlling parameter in operating the slagging gasifier to destroy chemical agents is the ratio of agent to oxygen/steam mixture. In general, adjusting the quantities of oxygen and steam flow entering the reaction zone can control the bed temperature and product gas composition.

"This document was prepared under contract with the United States Army for the sole purpose of evaluating the identified technology for potential application in the United States Army Chemical Demilitarization Program (CDP), based on information available to the reviewer at the time of the evaluation. Any opinions, findings, recommendations or conclusions expressed are stated in the context of the particular considerations of the CDP, and are not intended for use or reference in any way by any other party for any other purpose."

**Comment No. 11 (cont.)**

**Issue Code: 07**

In order to minimize potential conflicts over water availability during low-flow conditions, the State of Kentucky limits permitted users to no more than 10 percent of the lower average monthly flow.

**Comment No. 12**

**Issue Code: 02**

Comment noted. The Draft EIS is designed to present all of the possible environmental impacts of the various alternatives relating to the proposed federal action, both beneficial and detrimental. The economic benefits associated with the project are not intended as justification for the environmental costs of the project; however, they are presented as one of many resource areas impacted by the project.

14/22  
(cont.)

All 120 jobs associated with the operation of the Proposed Action would be created onsite in Clark County and all 270 of the jobs indirectly created would be within Clark, Fayette, and Madison Counties.

**Comment No. 13**

**Issue Code: 21**

The Kentucky Pioneer IGCC Demonstration Project is a federal action. The EIS is used as a tool to decide whether or not the DOE should provide funding to the project. If the project is approved, KPE would be required to abide by all local, state, and federal regulations.

**Comment No. 14**

**Issue Code: 22**

The facility would not be used as a nerve gas incinerator at any point during its operation.

**Comment No. 15**

**Issue Code: 21**

Comment noted. The proposed project would demonstrate power generation technology to produce clean energy from high-sulfur coal and RDF pellet co-feed.

Commonwealth of Kentucky House of Representatives  
State Representative Mr. Don Pasley  
Frankfort, KY  
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Technology No. 17

July 17, 2000

The oxygen/steam ratio balances the exothermic partial combustion reaction,  $C + 1/2 O_2 \rightarrow CO$ , with the endothermic water gas reaction,  $C + H_2O \rightarrow H_2 + CO$ . Variations in the ratio of hydrogen/carbon monoxide and the carbon monoxide/carbon dioxide in the gas indicate departures from steady-state conditions.

Use of the gasification process for destruction of chemical agents would not appear to significantly alter the number of process controls required, as the mass of agent added compared to the mass of coke or coal utilized for oxidation is small.

If refractory oxide packing were used instead of carbon pellets, to provide surface area for reaction, supplemental fuel would be required to ensure the desired reaction reduction conditions would be present.

### 3.3 Process Robustness

Given the large thermal mass contained within the reactor system, periodic process feed perturbations will not significantly affect the high reaction temperature, and hence reaction kinetics.

Variation in agent feed flow rate would require small adjustment in oxygen, steam and supplemental fuel flow to maintain bed temperature. The thermal inertia of the gasifier (due to the large mass of bed material) should allow small variations in feed without compromising destruction efficiency. Upon shutdown of agent feed, Dynecology reports that the gasifier can be turned down to 10 percent of its feed rate for coke, oxygen, and steam to put the unit on standby and remain in stable operation [1].

Specific data on operational reliability was not available in the information reviewed but the TOXIPLEX process would most likely achieve high operability and reliability given the maturity of the technology and the long operating history of commercially sized plants.

### 3.4 Destruction Efficiency

Dynecology reports destruction efficiencies of 6 and 7 nines when treating hexachlorobenzene and PCB's [6]. Dioxins and furans measured in the PCB tests were below  $0.03 \text{ ng/m}^3$  which is below the  $1 \text{ ng/m}^3$  EPA limit. Destruction efficiencies for chemical agents were not available and, while required as a condition for further process development, would not be expected to be significantly different. Dynecology reports that the time required for the destructive processes to occur is less than 500 milliseconds and most likely in the range of 50 to 100 milliseconds [1].

## 4. Process Safety

Due to the rapid destructive rate (low contact time required), the inventory of toxic materials available for release from the gasifier during an abnormal or accidental release condition is low.

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The low inventory minimizes both the on-site and off-site consequences for reaction vessel failure or leakage.

The high temperatures involved, the use of pure oxygen in the process, and the presence of hydrogen and carbon monoxide gas would require the use of normal industrial process safety measures. Experience with commercial operating facilities indicates that there have been no known accidents due to the release of hydrogen or carbon monoxide [2].

Dynecology recommends operation of the gasifier under a relatively low pressure (compared to commercial gasifiers) of 100 psig. A jacketed design with an inert gas is used for leakage detection and control. An even lower operating pressure could be used with a corresponding increase in vessel and equipment size and cost, if justified by a HAZOP analysis for reducing risk of failure.

For organic feed streams containing oxidizing agents such as dissolved munitions or explosives, the usual industrial safety design and operating requirements for this type of feed would need to be implemented.

**5. Environmental Impact**

The overall mass balance provided in Figure 3 identifies the quantity of waste generated. Assuming 10,000 pounds per day of VX as the agent treated, 27,293 pounds per day of solid waste would be sent to disposal. This includes 16,363 pounds per day of slag from the gasifier bottoms and 10,900 pounds per day of calcium sulfate from the gas clean-up units. The mass of slag generated is directly related to the ash content of the carbon/coal used in the gasifier. The total solid waste would be expected to be higher for treatment of the chemical agent hydrolysates, due to higher salt and water content, than for the treatment of chemical agents.

The solid waste volume from slag can be substantially reduced by substituting a refractory metal oxide (such as zirconia) to serve as the incandescent contact surface or by using a coke product with a low ash content [10]. The use of refractory packings as a bed may not be appropriate for feeds containing phosphorus due to the production of phosgene gas. A moving bed reactor design may be required an/or an external off-gas treatment process may be needed for the phosgene formed in the highly reducing environment of the reactor.

The glassy frit produced by quenching the molten slag is non-leachable and may be sold as an aggregate for road building or landfill. The practicality of utilizing solid waste products from an agent destruction plant is unlikely. Waste disposal alternatives to using the molten slag as an aggregate must be planned.

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The gaseous effluent is characterized as a fuel gas with a heating value of 300 BTU/ft.<sup>3</sup> This gas may be used as a supplemental fuel in a turbine to generate electric power or in a boiler to generate steam. Both alternatives would require use of a flare during unit downtime. Compressed storage of the gas is possible but would be very expensive due to the cost of the storage vessels. Economic liquefaction of the gas is not feasible since the major gas components are hydrogen and carbon monoxide, which have boiling points substantially below that of natural gas.

If the gasifier were not operating, an alternative source of gaseous fuel would be required to support on-site processes. The relatively short duration of the overall program and potential non-continuous operation of supporting facilities with the TOXIPLEX process complicate the use of the product gas for off-site applications. The cost of a turbine/generator may not be economical given the short mission time. Because sulfur, phosphorus, and halogens are potentially present in an agent feed (agent dependent), off-gas treatment for the removal of these inorganic components would be required as part of the off-gas treatment process.

Since agent from ton containers will contain heavy metals, their ultimate fate when introduced into the gasifier must be determined. It had been expected that metals or ungasified components of neat agent fed to reactor, or processed agents, limestone or carbonaceous feed would be concentrated in the slag. However, tests performed at Columbia University [6] with toxic heavy metal compounds indicate the opposite: "A preponderant fraction of the metal and metal oxides introduced with the 1:2 coal/RDF pellets was carried over with the gaseous products; part was plated out on the upper, cooler portion of the refractory gasifier lining; part was trapped out with the condensed coal tars; and a negligible fraction was present in the fritted vitreous, silico-alumina slag." These results indicate the importance of determining the final dispersion solids contained within the organic feedstock, whether it be neat or treated agent such as hydrolysate.

For feedstocks containing primarily organic materials, the highly reducing environment of the gasifier precludes the formation of furans and dioxins as would be found in an incinerator during periods of operational upsets. This, coupled with the high destruction efficiency found for tested organics and the low potential inventory of the gasifier, makes the gasifier a suitable treatment for chemical warfare agent if the issues of product gas volume and mass of solid waste is acceptable. The gasifier, as a chemical warfare agent treatment option, appears to be potentially viable compared with existing process options used or contemplated today for new facilities.

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5.1 Permitting History

There is extensive permitting history of the process for use as a gasifier. However, use of the process for destruction of hazardous materials only includes permitting as research and demonstration facilities.

6. Schedule

Prior to full-scale implementation a pilot scale facility would need to be built and tested, first with surrogate feed and then with agent. Dynecology expects this to take at least 3 to 6 months. The schedule for implementation of a full-scale design would be heavily dependent on permitting requirements, which are expected to be less than those required for permitting an incinerator.

7. Cost

Capital cost estimates were not contained within the information reviewed from Dynecology. For a 22,000 pound per day agent destruction facility, Dynecology reports a cost for operation of \$1500 to 2000 per ton or about \$7,500 to \$10,00 per 10,000 pounds of chemical agents destroyed [1]. Supporting information was not provided.

A detailed cost analysis comparing a facility using the TOXIPLEX technology versus existing technologies, such as incinerators was not provided within the material reviewed. Adjustment values for potential improved process control, lower inventory-at-risk, and higher destruction efficiency have not been determined and are required in order to assess the magnitude of potential benefits achieved by using this technology.

8. Implementation at Existing Chemical Demilitarization Incineration Facilities

Dynecology proposed [1] that TOXIPLEX replace the liquid agent incinerator at the existing Tooele, Utah site, but did not provide any site specific implementation information including interface requirements for existing systems, demonstration and test plans, construction schedules, waste handling, permitting requirements and schedules, etc.

The Tooele site includes four incinerator systems, each with a specific function of treating metal parts, explosives and propellants, liquid agent or dunnage. The TOXIPLEX system is applicable to only treating liquid agent and would only replace the existing liquid agent incinerator. The other incinerator systems would still remain in operation.

For an existing agent treatment facility utilizing incineration, cost factors such as providing new interfacing or support utilities such as material handing of coke pellets, off-gas treatment, and effluent flaring would additionally have to be addressed. Although no analysis has been

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performed, it would appear unlikely that a cost-benefit approach could be used to justify a process change utilizing this technology.

The hazards analysis [7] for the Tooele liquid incinerator system indicates that if failures were to occur, the agent feed piping system failures are most likely. Appropriate control design, however, could be employed to limit the release of agent from a feed line failure. Since the dominant failure modes and risks do not involve failure of the incinerator system, replacement of the incinerator with the TOXIPLEX system would not be expected to lead to an overall improvement in public safety.

**9. Conclusions**

- The TOXIPLEX technology offers the potential for high agent destruction efficiency. Destruction efficiencies of 6 and 7 nines were achieved when treating hexachlorobenzene and PCBs and destruction efficiencies for chemical agents would be expected to be as good.
- The solid waste (slag) quantity produced requires disposal, since use of the waste for other purposes is unlikely. However, since the solid waste produced is a function of the ash content of the fuel, it can be virtually eliminated by using a low ash petroleum coke or a refractory metal oxide such as zirconia instead of ordinary coke as the incandescent contact surface.
- Use of the product as a fuel needs to be identified, otherwise it would have to be flared. Alternatively, it could be used as a supplemental fuel in the event that (in order to substantially reduce the production of solid waste or slag) a refractory metal oxide is substituted for coke as the incandescent contact surface.
- The thermal inertia of the gasifier would allow variations in feeds without compromising destruction efficiency.
- The TOXIPLEX process would most likely achieve high operability and reliability given the maturity of the technology and the long operating history of commercial-size slagging gasifier plants.
- Due to the rapid destruction rate (50 to 100 milliseconds), the inventory of toxic materials available for release from the gasifier during an abnormal or accidental release condition is extremely low. The low inventory minimizes both the on-site and off-site consequences for reaction vessel failure or leakage. The safety of existing support systems at Tooele may limit the safety benefits of the TOXIPLEX process. Therefore, the overall benefit for replacement of the agent incinerator at Tooele, with the TOXIPLEX process, appears to be marginal.

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- For new facilities treating chemical warfare agents, this technology may be competitive with existing technologies and provide potential advantages in destruction capability and lower inventory-at-risk.

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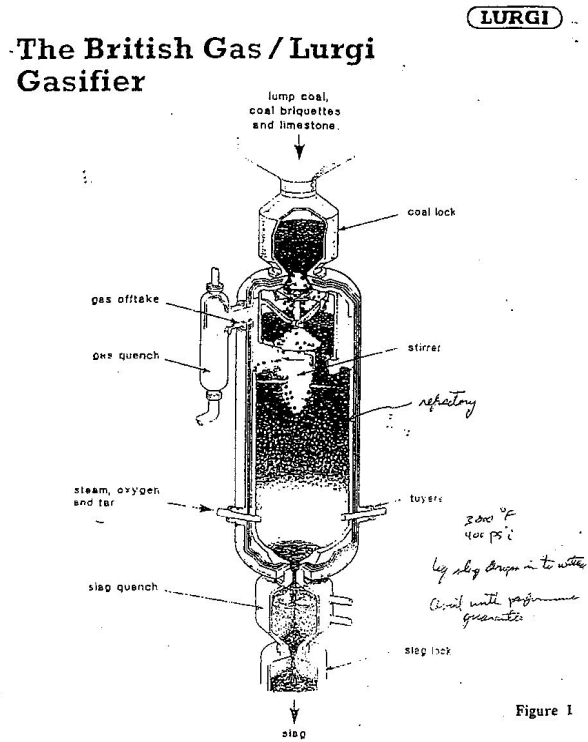
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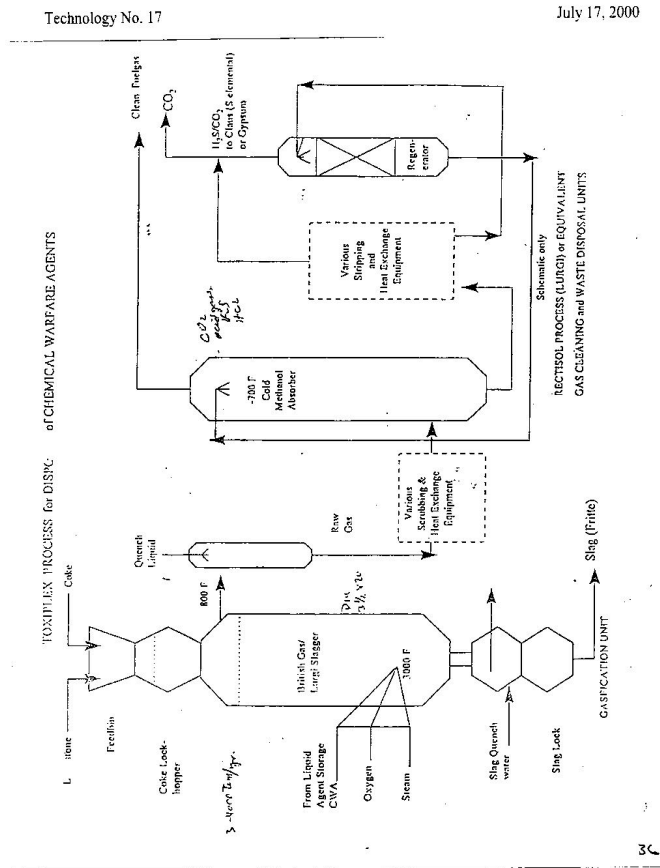
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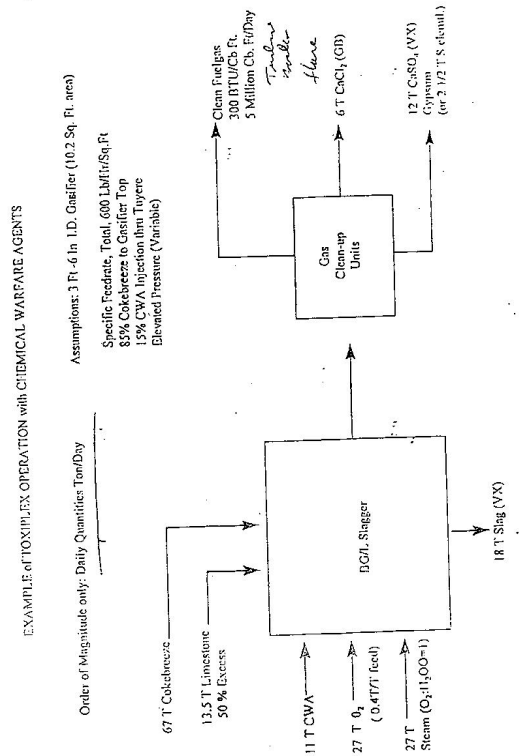
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season. But is it? See  
review of it and four  
other films opening today.

**Kentucky**

**Smokers rebuffed:**  
The Kentucky Supreme  
Court ruled that suing  
smokers cannot get a  
share of the state's portion  
of the national tobacco set-  
tlement. **B1**

**Business**

**Jacobson's future:**  
Jacobson Stores Inc. says  
it may be forced to reor-  
ganize or liquidate its 23-  
store chain, casting doubt  
on the future of its Oxmoor  
center store. **B10**



**World**

**Argentina unrest:**  
President Fernando De la  
Riua reportedly submitted  
his resignation as his gov-  
ernment crumbled amid  
rioting and looting  
sparked by anger over Ar-  
gentina's deepening eco-  
nomic crisis. Above, pro-  
testers chanted in down-  
town Buenos Aires. **A4**

**TOMORROW**

**Cartoonist:** Don Rosa, the  
cartoonist who gave  
Mickey Mouse the name  
"Captain Ken-  
nedy," has published the  
first in a book overseas,  
and he truly is a hero.

**ONLINE**

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**FORECAST**

# New power plants pose pollution challenge

Report: State must act to protect environment

By ALAN MAIMON  
The Courier-Journal

FRANKFORT, Ky. — Kentuckians could breathe dirtier air if the state fails to prevent potential environmental hazards from 22 new power plants, according to an environmental report released yesterday.

A separate report on the impact of the proposed plants on the state's power grid said the grid wouldn't be able to handle the volume of wholesale electricity transfers during high demand if all the plants are built, but is adequate to meet Kentucky's needs.

However, Martin Huelsmann, chairman of the Kentucky Public Service Commission, which conducted the grid study, said brownouts are unlikely. Kentucky's needs will take precedence in any case where the grid is threatened with being overburdened, he said.

Most of the proposed new plants, known as "merchant" plants, would sell electricity to out-of-state utilities during times of peak demand.

The environmental study, a six-month effort by the Kentucky Natural Resources and Environmental Protection Cabinet, said four counties — Henderson and Daviess on the Ohio River in Western Kentucky, and Boyd and Lawrence around Ashland — could have trouble meeting Environmental Protection Agency ozone standards if all of the power plants are built.

Ground-level ozone, a key component of smog, results from burning fossil fuels.

Bob Logan, commissioner of the Kentucky Department of Environmental Protection, said the cabinet was confident the plants could operate without unacceptable damage to human health or the environment.

The cabinet and the PSC assessed the environmental and power transmission impacts of the proposed plants in separate reports presented yesterday to the state Energy Policy Advisory Board.

Among the potential environmental



**Logan:** The state thinks the plants can operate without unacceptable damage to human health or the environment.



A group of British Royal Marines left a C-130 transport plane at Bagram base, north of Kabul, Afghanistan, yesterday.

**AFGHANISTAN**

## British peacekeepers land near Kabul

Associated Press

KABUL, Afghanistan — The first British peacekeepers flew into Afghanistan yesterday as the United Nations approved their mission to help the nation heal after decades of war. Even as they landed, the Afghan defense minister insisted they would have no authority to use force.

Fifty-three British Royal Marines landed at Bagram air base north of Kabul yesterday, part of an initial contingent of up to 200 peacekeepers that will move into the capital ahead of tomorrow's inauguration of an interim administration.

The U.N. Security Council unanimously backed the British-led force for the Kabul area. The force, which will eventually number 3,000-5,000 troops, was authorized to take military action as it helps keep security under the interim government, which is to rule for six months.

Hamid Karzai, has wielded a powerful role for the interim government. The interim foreign minister sent a letter to the Security Council last week agreeing to a clause that would allow the interim government to take military action, backing off an earlier promise to do so. But interim Defense Minister Med Fahir, reflecting an unwillingness to see a presence of foreign force in Afghanistan, said the interim government would not be involved in factional fighting.

"They are here because we need them," he said. But their presence is as much a security as a political issue, Fahir said of the peacekeepers.

The agreement signed by the interim government authorized the security forces in Kabul and the rest of the country to take military action against

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woman in Chicago, had no comment on the lawsuit.  
The lawsuit was filed the same day the Justice Department announced that victims' families and survivors of the Sept. 11 terrorist attacks can be

of America, and Robert Clifford, an aviation disaster attorney in Chicago, said Mariani's lawsuit is the first to be filed against an airline over the attacks.

American plane in the... Clifford, head of the American Bar Association's task force on terrorism and the law, criticized the timing of the lawsuit.

"There are families in need who don't need to be manipulated by lawyers," he said. "This does not add but to the confusion."

# New power plants pose pollution challenge

Continued from Page One

problems cited in the cabinet's report:

Some of the 22 plants proposed since October 1999 could emit arsenic and other hazardous pollutants into the air.

Water supplies might be inadequate to meet the demands of some of the plants during times of low flow.

Heavy-metal emissions could make soil around the power plants toxic.

But many of the new plants will use technology intended to reduce pollution emissions, officials said.

If the state takes steps that include implementing EPA standards for nitrogen-oxide emissions, conducting further analysis of air pollution and setting emission standards for pollutants that are currently unregulated, the plants will not create serious environmental consequences, Logan said.

Logan said the state's projections for pollution emissions were based on "worst-case scenario" estimates.

In all, the cabinet made 14 recommendations. They included conducting a study of pollution caused by increased coal mining to fuel more power plants; analyzing how many power plants Kentucky can handle; and requiring all power plants to comply with water-withdrawal rules imposed on most other industries.

"A lot more has to be done so we can make reasoned decisions," Logan said.

The PSC recommended that Gov. Paul Patton extend for six months the moratorium he imposed in June on new power plant applications so the advisory board, state agencies and the General Assembly can consider the plants' impact.

The moratorium is to expire in January.

The PSC said Kentucky's current grid can handle between 6,000 and 7,800 megawatts of electricity but would need to be able to handle up to 11,300 megawatts if all 22 plants are built. The PSC said the operators of the new plants should pay for required upgrades to transmission facilities.

Patton said at yesterday's meeting

**"Can we do this? Yes, we can, but we have to do several things to make sure nothing inappropriate happens to our citizens."**

George Siemens, a vice president of LG&E

that he plans to present a package of legislation dealing with power plants to the 2002 General Assembly. It is likely to include a bill to make merchant power plants subject to local planning and zoning requirements. Regulated public utilities are exempt from such requirements.

Utility industry representatives and environmentalists on the energy advisory board agreed that the agencies' reports raised important questions.

"Can we do this? Yes, we can, but we have to do several things to make sure nothing inappropriate happens to our citizens," said George Siemens, a vice president of LG&E.

Tom FitzGerald, director of the Kentucky Resources Council environmental group and an advisory board member, said merchant plants have a responsibility to deliver energy safely and reliably. "I think the clear message came through that merchant plants have to carry their own weight," FitzGerald said.

Patton appointed the advisory board to study the power-plant issue when he imposed the moratorium.

He said yesterday that he would consider extending the moratorium, but not to include any of the 22 applications currently under review.

FitzGerald, interviewed after the meeting, said he was "disappointed that the governor took the position that we could not take pending applications and include them in the moratorium."



Plant name	County	Size in megawatts	Fuel burned
1 Dayton Power and Light Hardinsburg	Breckinridge	400	Natural gas oil
2 Trigen-Cinergy Solutions of Silvergrove	Campbell	20	Natural gas co-gen
3 East Kentucky Power J.K. Smith Station	Clark	400	Natural gas oil
4 Global Energy - Kentucky Pioneer Energy	Clark	540	Gasified coal gasified garbage
5 Calla Energy - Kentucky Pioneer Energy	Estill	110	Waste coal biomass
6 Cash Creek	Henderson	500	Coal
7 Columbia Electric Corp. Grane Creek	Henderson	500	Natural gas
8 Louisville Gas & Electric Paddy's Run	Jefferson	151	Natural gas
9 Cinergy - Erlanger	Kenton	96	Natural gas
10 Kentucky Mountain Power	Knott	500	Waste coal
11 Dynegy - Riverside Generation*	Lawrence	1,040	Natural gas
12 Enron - Calvert City Power	Marshall	540	Natural gas
13 Duke Energy - Marshall County Generation	Marshall	640	Natural gas oil
14 Westlake Energy Corp.	Marshall	520	Natural gas
15 Air Products and Chemicals	Marshall	26	Natural gas
16 Kentucky Western Power	Marshall	500	Waste coal
17 Kentucky Eastern Power Martin County	Marion	500	Waste coal
18 East Kentucky Power Cooperative - Spurlock	Mason	270	Coal
19 Duke Energy - Metcalfe County Generation	Metcalfe	640	Natural gas oil
20 Thoroughbred Generating	Muhlenberg	1,500	Coal
21 Dynegy - Bluegrass Generation*	Oldham	624	Natural gas
22 Louisville Gas & Electric Trimble Station	Trimble	1,020	Natural gas

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Leslie Preston  
1050 Ferry Rd.  
Winchester, KY 40391  
737-2445

Main Concerns pertaining to coal/garbage power plant

1. Pollution from smokestack emissions. Coal already has a bad track record. What substances in the solid waste fuel are left as byproducts (emissions) from incineration.
2. Water pollution. Kentucky River is close by. Water removed from runoff into?
3. Garbage fuel contamination and storage? Future fuel processing on site?
4. Damage to roads (Highway 89). Safety due to more big truck traffic.

| 16/06  
| 17/07  
| 18/12, 19/16  
| 20/10

**Comment No. 16**

**Issue Code: 06**

The major criteria pollutant emissions and hazardous air pollutant emissions associated with the proposed project are identified in Tables 5.7-1 and 5.7-2 of the EIS. Table 5.7-4 identifies estimated maximum downwind concentrations of hazardous pollutants expected to be emitted by the proposed facility and the associated maximum lifetime cancer risks. The air quality permit for the project requires continuous emission monitoring for major criteria pollutants and annual emissions testing for cadmium, lead, mercury, hydrogen chloride, and dioxins/furans.

**Comment No. 17**

**Issue Code: 07**

As stated in Section 5.8, 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, including thermal limits, 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 KPDES permit. These limitations would be established based on site-specific computer modeling of the 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 protect existing water quality.

**Comment No. 18**

**Issue Code: 12**

Chapter 3, Section 3.1.2.1 in the EIS, describes the handling and storage of raw materials, including RDF. The RDF pellets would be handled and stored to prevent release of particulate matter to the atmosphere or contact with water and possible contamination of soil and surface water from runoff.

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Petition To Our Government

We the people of Clark County hereby exercise our patriot's duty to protest the proposed "experimental" garbage burning power plant in the Trapp Community. The idea of bringing New York's and New Jersey's garbage into our community is not healthy for our children's future or the welfare of our good citizens of Winchester and Clark County.  
"United We Stand"

**Comment No. 19**

**Issue Code: 16**

Fuel processing will not be performed onsite. All RDF pellet processing will be done by the supplier on the east coast.

**Comment No. 20**

**Issue Code: 10**

21/16

Comment noted. Impacts to traffic levels along Kentucky Highway 89 are addressed in Section 5.11, Traffic and Transportation. As stated, during construction, 500 to 1,000 vehicle trips would occur along Kentucky Highway 89 at the beginning and end of the construction workday. The exact number would depend on the staffing levels required onsite. Construction schedules typically call for workers to be onsite relatively early in the morning to avoid morning schoolbus traffic, until early afternoon. The Transportation Division of the Clark County School Board indicates that schoolbuses utilize Kentucky Highway 89 when construction workers would be leaving the site. Section 5.11, Traffic and Transportation, has been modified to reflect the impacts of added vehicles on schoolbus usage.

22/11

The construction vehicles would haul a maximum of 18 metric tons (20 tons) of cargo each, which would place the overall weight below the Kentucky-mandated maximum weight for Kentucky Highway 89 of 36,288 kilograms (80,000 pounds) for a five-axle vehicle. The Kentucky Transportation Cabinet indicated any vehicle below that weight traveling along that road would not be expected to cause damage to the roadway. Should damage occur from vehicles carrying more than the maximum weight allowance, the operator of the trucks, in this case KPE, would be responsible for any repairs to the road surface. Section 5.11, Traffic and Transportation, has been modified to address the concerns of damage to the local roads.

Commonwealth of Kentucky House of Representatives  
State Representative Mr. Don Pasley  
Frankfort, KY  
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**Comment No. 21** **Issue Code: 16**  
Comment noted. The relatively small amounts and generally widely dispersed nature of MSW in Kentucky does not economically support exclusive utilization of Kentucky-generated MSW to produce RDF supplies. Importing RDF from a densely populated metropolitan area is more economically viable in order to supply the necessary amount of RDF required to operate the plant.

**Comment No. 22** **Issue Code: 11**  
No impacts to the general public's health and safety would be expected from the operation of the proposed facility, particularly from the combustion of RDF. Incremental increases in air emissions from operation of the combustion turbines and cooling tower would be a very small fraction of the relevant federal and state ambient air quality standards (less than 1 percent for gaseous pollutants such as nitrogen dioxide, sulfur dioxide, and carbon monoxide and less than 4 percent of the federal 24-hour PM<sub>10</sub> standard). There would be no significant short- or long-term air quality impacts and the health risks are expected to be minor.