

APPENDIX A

CONSULTATION LETTERS

This appendix includes consultation/approval letters between the U.S. Department of Energy and the U.S. Fish and Wildlife Service regarding threatened and endangered species, and between other state and Federal agencies as needed.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

446 Neal Street
Cookeville, TN 38501

June 15, 2000

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

Subject: Notice of Intent to Prepare an Environmental Impact Statement (EIS) for the Kentucky Pioneer Integrated Gasification Combined Cycle Demonstration Project, Clark County, Kentucky.

Dear Mr. Spears:

Fish and Wildlife Service personnel have reviewed the subject notice. Please consider the following comments during preparation of the EIS.

Our endangered species database contains a record of running buffalo clover (*Trifolium stoloniferum*) at a location approximately 11 miles from the proposed project site. This federally listed (endangered) species may occur within the project boundary. We recommend that you evaluate the potential for impact to the species and report your findings to this office. A finding of "may affect" would likely result in a need to coordinate further to develop protection measures.

Construction or operation of the facility could cause negative impacts to wetlands or streams. Further, withdrawal of water from the Kentucky River could result in significant aquatic impacts. The Kentucky River is an important fishery and contains several mussel beds downstream of the proposed project. Because a map of the proposed project location was not included with the subject notice, we were unable to screen for wetland and stream impacts. We recommend that potential impacts to wetlands and aquatic resources be examined in detail.

Thank you for this opportunity to review the scoping notice. Please contact David Pelren of my staff at 931/528-6481 (ext. 204) or by e-mail at david_pelren@fws.gov if you have questions concerning these comments.

Sincerely,

A handwritten signature in cursive script that reads "Lee A. Barclay".

Lee A. Barclay, Ph.D.
Field Supervisor



United States Department of the Interior

FISH AND WILDLIFE SERVICE

446 Neal Street
Cookeville, TN 38501

July 25, 2000

Mr. Chuck Pergler
EIS Ecological Resources Leader
Tetra Tech, Inc.
2502 35th Street
Los Alamos, New Mexico 87544

Dear Mr. Pergler:

Thank you for your letter, dated June 21, 2000, regarding the preparation of an Environmental Impact Statement (EIS) for the proposed Kentucky Pioneer Integrated Gasification Combined Cycle Demonstration Project in Clark County, Kentucky. U.S. Fish and Wildlife Service (Service) personnel have reviewed the information submitted and offer the following comments.

Endangered species collection records available to the Service do not indicate that federally listed or proposed endangered or threatened species occur within the impact area of the project. We note, however, that collection records available to the Service may not be all-inclusive. Our data base is a compilation of collection records made available by various individuals and resource agencies. This information is seldom based on comprehensive surveys of all potential habitat and thus does not necessarily provide conclusive evidence that protected species are present or absent at a specific locality.

Thank you for the opportunity to comment. If you have any questions, please contact Steve Alexander of my staff at 931/528-6481, ext. 210, or via c-mail at steven_alexander@fws.gov.

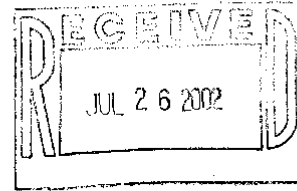
Sincerely,

Lee A. Barclay, Ph.D.
Field Supervisor



Education, Arts and Humanities Cabinet

KENTUCKY HERITAGE COUNCIL
The State Historic Preservation Office



David L. Morgan
Executive Director and
SHPO

Paul E. Patton
Governor
Marlene M. Helm
Cabinet Secretary

July 10, 2002

Mr. Roy Spears
US Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880
Mail Stop N-03

Re: Kentucky Pioneer Integrated Gasification Combined Cycle Demonstration Project; Draft Environmental Impact Statement. Clark County, Kentucky.

Dear Mr. Spears:

The State Historic Preservation Office has received for review and approval the above referenced draft environmental impact statement. On page S-11 of the document it states that, "The 1,263-hectare (3,120-acre) J.K. Smith tract is located within the Kentucky River Basin. The site is a hilly highland bounded by the Upper Howard Creek on the North and West, the freight rail line on the East, and the Kentucky River on the South. The land at the site has been previously disturbed and graded during the initial phases of the discontinued J.K. Smith Power Station constructed in the 1980's. Extensive cultural resources investigations have been completed in the J.K. Smith site area. Based on literature and records review of the 121-hectare (300-acre) project site, prehistoric resources were identified. Details of the findings are presented in Section 4.4.3, Cultural Resources of the Proposed Facility Location."

We are in agreement that the larger site has been previously disturbed and that cultural resources were identified and recorded/excavated. The Section 106 Review process was completed for this projects Area of Potential Effect in December of 1980. The terms of the Memorandum of Agreement drawn up in conjunction with the Advisory Council on Historic Preservation for the proposed J.K. Smith Power Station project have been met and further identification, evaluation, mitigation, consultation activities are no longer required. Therefore, in accordance with 36CFR Part 800.4(d) of the Advisory

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Page 2
Mr. Roy Spears
July 10, 2002

Council's revised regulations, our finding is that there is **No Effect on Historic Properties** for this undertaking.

Should you have any questions, feel free to contact Craig Potts of my staff at (502) 564-7005 ext. 121.

Sincerely,



David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer

Cc: John Preston (Army Corps of Engineers)

JAMES E. BICKFORD
SECRETARY



PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
14 REILLY RD
FRANKFORT KY 40601-1190

June 27, 2002

REC'D
D. N. LOCKWOOD
JUL 01 2002

Mr. Dwight N. Lockwood, P.E., Manager
Regulatory Affairs
Global Energy, Inc.
Suite 2000
312 Walnut Street
Cincinnati, OH 45202

RE: Kentucky Pioneer Energy IGCC Project
Clark County

Dear Mr. Lockwood:

I am writing you in response to your letter of October 9, 2000 concerning the applicability of the solid waste statutes and administrative regulations to the proposed gasification of municipal solid waste (MSW) pellets at the planned Integrated Gasification Combined Cycle plant near Trapp, Kentucky. According to your predicted characterization, a contractor would make the pellets as follows: first, the recyclables would be removed, leaving about 70% paper and 10% plastics; then, the manufacturer would mix binders with the material and extrude the mix into pellets. The finished product would be typical for most Refuse Derived Fuels (RDF).

The Division of Waste Management (DWM) has determined that the above-described MSW pellets would be a RDF. Also, the RDF is a recovered material, and that the clean-coal project you describe in your letter will be considered a recovered material processing facility. This determination is based on the description of the planned Integrated Gasification Combined Cycle plant that you provide in your letter of October 9, 2000.

The statute defines "Refuse Derived Fuel" as "... a sized, processed fuel product derived from the extensive separation of municipal solid waste, which includes the extraction of recoverable materials for recycling and the removal of nonprocessables such as dirt and gravel prior to processing the balance of the municipal solid waste into the refuse-derived fuel product" (KRS 224.01-010(23)). This determination that no waste permit is needed for the gasification process is also dependent on Pioneer Energy using RDF that conforms to the statutory definition. At least thirty (30) days before beginning gasification, Pioneer Energy must send the Natural Resources and Environmental Protection Cabinet (cabinet) the description of the selected RDF process. The cabinet will evaluate if the manufacturing of the fuel meets the statutory definition.



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Mr. Dwight N. Lockwood, P.E.
Page No. 2
June 27, 2002

This determination does not release the company from properly handling, storing and disposing of all waste generated by the facility. Please remember that a hazardous waste determination must be conducted on the resulting ash and other wastestreams in accordance with 401 KAR 32:010, Section 2. For the ash, this normally entails the Toxic Characteristic Leaching Procedure (TCLP) for metals. Underground storage tanks containing petroleum or hazardous materials are regulated by DWM under 401 KAR 42:020 and KRS 224.60-105, as well. The company must also have a valid permit from the Division for Air Quality (DAQ) before construction may begin. As you know, DAQ issued a permit (no. V-00-049) to the company on June 7, 2001, and the company initiated administrative litigation to challenge the permit in *Kentucky Pioneer Energy, LLC v. NREPC*, File No. DAQ-25321-037. That case remains pending.

If the process you describe in your October 9, 2000 letter will change in any manner, please provide DWM with a written description of that change, so that we may re-evaluate the determination we are making today. If the company decides to process solid waste into RDF in Kentucky, DWM may determine that the facility is a materials recovery facility. Materials recovery facilities are solid waste management facilities that do require permits. If the company is considered to have a materials recovery facility, it may be eligible for a registered-permit-by-rule for a solid waste transfer station. In order to obtain a registered-permit-by-rule, a public notice is stipulated two weeks before submittal of the registration form, and a public meeting may also be required.

As the project moves forward, please stay in touch with DWM to discuss the applicability of waste requirements. Please feel free to contact George Gilbert at (502) 564-6716 regarding any concerns or questions about the project.

Sincerely,



Robert H. Daniell
Director

RHD/GFG/gfg

c: Clark County Fiscal Court
Todd Royer, P.E., URS
Division for Air Quality
Frankfort Regional Office
Solid Waste Branch

APPENDIX B

NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL IMPACT STATEMENT FOR THE KENTUCKY PIONEER INTEGRATED GASIFICATION COMBINED CYCLE DEMONSTRATION PROJECT, TRAPP, KY AND NOTICE OF FLOODPLAIN INVOLVEMENT

The following is the Notice of Intent published by the U.S. Department of Energy (DOE) on April 14, 2000, in the *Federal Register* announcing its intent to prepare an environmental impact statement for the Kentucky Pioneer IGCC Demonstration Project (65 FR 20142). DOE notified interested persons, including federal, state, and local government agencies, public interest groups, regulators, and members of the general public, to participate in the scoping process.

APPENDIX C

KENTUCKY PIONEER INTEGRATED GASIFICATION COMBINED CYCLE DEMONSTRATION PROJECT ENVIRONMENTAL IMPACT STATEMENT CONTRACTOR DISCLOSURE STATEMENT

The following is the disclosure statement, pursuant to 40 *Code of Federal Regulations* 1506.5(c) provided by Tetra Tech, Inc., the preparer of this Environmental Impact Statement.

NEPA DISCLOSURE STATEMENT
FOR PREPARATION OF THE
KENUCKY PIONEER INTEGRATED GASIFICATION COMBINED CYCLE
DEMONSTRATION PROJECT ENVIRONMENTAL IMPACT STATEMENT

CEQ Regulations at 40 CFR 1506.5(c), which have been adopted by the DOE (10 CFR 1021), require contractors who will prepare an EIS to execute a disclosure specifying that they have no financial or other interest in the outcome of the project. The term "financial interest or other interest in the outcome of the project" for purposes of this disclosure is defined in the March 23, 1981 guidance "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," 46 FR 8026-18038 at Question 17a and b.

"Financial or other interest in the outcome of the project" includes "any financial benefit such as a promise of future construction or design work in the project, as well as indirect benefits the contractor is aware of (e.g., if the project would aid proposals sponsored by the firm's other clients) (46 FR 18026-18038 at 18031).

In accordance with these requirements, the offeror and any proposed subcontractors hereby certify as follows: (check either (a) or (b) to assure consideration of your proposal).

- (a) X Offeror and any proposed subcontractor have no financial or other interest in the outcome of the project.
- (b) Offeror and any proposed subcontractor have the following financial or other interest in the outcome of the project and hereby agree to divest themselves of such interest prior to award of this contract.

Financial or Other Interests

- 1.
- 2.
- 3.

Certified by:


SIGNATURE

Thomas E. Magette, Vice President
PRINTED NAME AND TITLE

Tetra Tech, Inc.
COMPANY

October 17, 2001
DATE

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 commentators 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

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

Table D-2. Document and Comment Submission Overview

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

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

Code	Issue
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">• NEPA Process• Public Involvement/Community Relations
22	Outside the Scope of the EIS
23	Editorial

Table D-4. Public Meeting Attendees

Attendees on December 10, 2001-Lexington, KY

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

Attendees on December 11, 2001-Trapp, KY

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

Table D-4. Public Meeting Attendees (continued)

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

Commentors	Transcript Page Number
December 10, 2001-Lexington, KY	
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
December 11, 2001-Trapp, KY	
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

Table D-6. Index of Commentors

Commentor Information	Issue Codes	Page Number
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)

Commentor Information	Issue Codes	Page Number
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)

Commentor Information	Issue Codes	Page Number
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

Organization/Commentor Name	Issue Code Number	Page Number
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

Issue Code Number	Page Numbers
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.

APPENDIX E

UNIVERSAL TREATMENT STANDARDS FRIT TEST RESULTS

This appendix provides the full screen analysis for the U.S. Environmental Protection Agency Universal Treatment Standards constituents. The relevancy of the leach test results presented here are discussed in more detail in Chapter 3 of this EIS. Note that the sample that provided these results originated from a commercial scale British Gas Lurgi gasifier that is operating on a 100 percent coal feed.

<u>Regulated Constituent</u> <u>Common Name</u>	<u>CAS Number</u>	<u>Non WW</u>	<u>Analytical Results</u>		
		<u>Standard</u>	<u>Concn,</u>	<u>Concn, mg/l</u>	<u>Detection</u>
		<u>mg/kg or as</u>	<u>mg/kg</u>	<u>(TCLP)</u>	<u>Limit mg/kg</u>
		<u>mg/l TCLP</u>			<u>or mg/l</u>
<u>Acenaphthylene</u>	<u>208-96-8</u>	<u>3.4</u>	<u>ND</u>		<u>0.00755</u>
<u>Acenaphthene</u>	<u>83-32-9</u>	<u>3.4</u>	<u>ND</u>		<u>0.00552</u>
<u>Acetone</u>	<u>67-64-1</u>	<u>160</u>	<u>ND</u>		<u>0.00482</u>
<u>Acetonitrile</u>	<u>75-05-8</u>	<u>38</u>	<u>ND</u>		<u>0.00289</u>
<u>Acetophenone</u>	<u>96-86-2</u>	<u>9.7</u>	<u>ND</u>		<u>0.00356</u>
<u>2-Acetylaminofluorene</u>	<u>53-96-3</u>	<u>140</u>	<u>ND</u>		<u>0.00708</u>
<u>Acrolein</u>	<u>107-02-8</u>	<u>NA</u>	<u>ND</u>		<u>0.00491</u>
<u>Acrylamide</u>	<u>79-06-1</u>	<u>23</u>			
<u>Acrylonitrile</u>	<u>107-13-1</u>	<u>84</u>	<u>ND</u>		<u>0.0015</u>
<u>Aldicarb sulfone</u>	<u>1646-88-4</u>	<u>0.28</u>			
<u>Aldrin</u>	<u>309-00-2</u>	<u>0.066</u>			
<u>4-Aminobiphenyl</u>	<u>92-67-1</u>	<u>NA</u>			
<u>Aniline</u>	<u>62-53-3</u>	<u>14</u>	<u>ND</u>		<u>0.0180</u>
<u>Anthracene</u>	<u>120-12-7</u>	<u>3.4</u>	<u>ND</u>		<u>0.00902</u>
<u>Aramite</u>	<u>140-57-8</u>	<u>NA</u>			
<u>alpha-BHC</u>	<u>319-84-6</u>	<u>0.066</u>			
<u>beta-BHC</u>	<u>319-85-7</u>	<u>0.066</u>			
<u>delta-BHC</u>	<u>319-86-8</u>	<u>0.066</u>			
<u>gamma-BHC</u>	<u>58-89-9</u>	<u>0.066</u>			
<u>Barban</u>	<u>101-27-9</u>	<u>1.4</u>			
<u>Bendiocarb</u>	<u>22781-23-3</u>	<u>1.4</u>			
<u>Bendiocarb phenol</u>	<u>22961-82-6</u>	<u>1.4</u>			
<u>Benomyl</u>	<u>17804-35-2</u>	<u>1.4</u>			
<u>Benzene</u>	<u>71-43-2</u>	<u>10</u>	<u>ND</u>		<u>0.000625</u>
<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>3.4</u>	<u>ND</u>		<u>0.00572</u>
<u>Benzal chloride</u>	<u>98-87-3</u>	<u>6.0</u>			
<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>6.8</u>	<u>ND</u>		<u>0.00829</u>
<u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>6.8</u>	<u>ND</u>		<u>0.00856</u>
<u>Benzo(g,h,i)perylene</u>	<u>191-24-2</u>	<u>1.8</u>			<u>0.00599</u>
<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>3.4</u>	<u>ND</u>		<u>0.00862</u>
<u>Bromodichloromethane</u>	<u>75-27-4</u>	<u>15</u>	<u>ND</u>		<u>.000377</u>
<u>Bromomethane/Methyl bromide</u>	<u>74-83-9</u>	<u>15</u>	<u>ND</u>		<u>0.000623</u>
<u>4-Bromophenyl phenyl ether</u>	<u>101-55-3</u>	<u>15</u>	<u>ND</u>		<u>0.00734</u>
<u>n-Butyl alcohol</u>	<u>71-36-3</u>	<u>2.6</u>			
<u>Butylate</u>	<u>2008-41-5</u>	<u>1.4</u>			
<u>Butyl benzyl phthalate</u>	<u>85-68-7</u>	<u>28</u>	<u>ND</u>		<u>0.0111</u>
<u>2-sec-Butyl-4,6-dinitrophenol/Dinoseb</u>	<u>88-85-7</u>	<u>2.5</u>			
<u>Carbaryl</u>	<u>63-25-2</u>	<u>0.14</u>			

Universal Treatment Standards
Frit Test Results

<u>Regulated Constituent</u> <u>Common Name</u>	<u>CAS Number</u>	<u>Non WW</u>	<u>Analytical Results</u>		
		<u>Standard</u>	<u>Concn,</u>	<u>Concn, mg/l</u>	<u>Detection</u>
		<u>mg/kg or as</u>	<u>mg/kg</u>	<u>(TCLP)</u>	<u>Limit mg/kg</u>
		<u>mg/l TCLP</u>			<u>or mg/l</u>
<u>Carbenzadim</u>	<u>10605-21-7</u>	<u>1.4</u>			
<u>Carbofuran</u>	<u>1563-66-2</u>	<u>0.14</u>			
<u>Carbofuran phenol</u>	<u>1563-38-8</u>	<u>1.4</u>			
<u>Carbon disulfide</u>	<u>75-15-0</u>	<u>4.8 mg/l</u>	<u>ND</u>	<u>< 0.00003</u>	<u>0.00065</u>
		<u>TCLP</u>		<u>(estimated)</u>	
<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>6.0</u>	<u>ND</u>		<u>0.000426</u>
<u>Carbosulfan</u>	<u>55285-14-8</u>	<u>1.4</u>			
<u>Chlordane (alpha and gamma isomers)</u>	<u>57-74-9</u>	<u>0.26</u>			
<u>p-Chloroaniline</u>	<u>106-47-8</u>	<u>16</u>	<u>ND</u>		<u>0.0110</u>
<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>6.0</u>	<u>ND</u>		<u>0.000455</u>
<u>Chlorobenzilate</u>	<u>510-15-6</u>	<u>NA</u>	<u>ND</u>		<u>0.00571</u>
<u>2-Chloro-1,3-butadiene</u>	<u>126-99-8</u>	<u>0.28</u>			
<u>Chlorodibromomethane</u>	<u>124-48-1</u>	<u>15</u>			
<u>Chloroethane</u>	<u>75-00-3</u>	<u>6.0</u>	<u>ND</u>		<u>0.000695</u>
<u>bis(2-Chloroethoxy)methane</u>	<u>111-91-1</u>	<u>7.2</u>	<u>ND</u>		<u>0.00543</u>
<u>bis(2-Chloroethyl)ether</u>	<u>111-44-4</u>	<u>6.0</u>	<u>ND</u>		<u>0.00500</u>
<u>Chloroform</u>	<u>67-66-3</u>	<u>6.0</u>	<u>ND</u>		<u>0.000487</u>
<u>bis(2-Chloroisopropyl)ether</u>	<u>39638-32-9</u>	<u>7.2</u>			
<u>p-Chloro-m-cresol</u>	<u>59-50-7</u>	<u>14</u>	<u>ND</u>		<u>0.00758</u>
<u>2-Chloroethyl vinyl ether</u>	<u>110-75-8</u>	<u>NA</u>			
<u>Chloromethane/Methyl chloride</u>	<u>74-87-3</u>	<u>30</u>	<u>ND</u>		<u>0.00127</u>
<u>2-Chloronaphthalene</u>	<u>91-58-7</u>	<u>5.6</u>	<u>ND</u>		<u>0.00787</u>
<u>2-Chlorophenol</u>	<u>95-57-8</u>	<u>5.7</u>	<u>ND</u>		<u>0.00515</u>
<u>3-Chloropropylene</u>	<u>107-05-1</u>	<u>30</u>	<u>ND</u>		<u>0.00114</u>
<u>Chrysene</u>	<u>218-01-9</u>	<u>3.4</u>	<u>ND</u>		<u>0.00638</u>
<u>o-Cresol</u>	<u>95-48-7</u>	<u>5.6</u>			
<u>m-Cresol (difficult to distinguish from p-cresol)</u>	<u>108-39-4</u>	<u>5.6</u>			
<u>p-Cresol (difficult to distinguish from m-cresol)</u>	<u>106-44-5</u>	<u>5.6</u>			
<u>m-Cumenyl methylcarbamate</u>	<u>64-00-6</u>	<u>1.4</u>			
<u>Cyclohexanone</u>	<u>108-94-1</u>	<u>0.75 mg/l</u>			
		<u>TCLP</u>			
<u>o,p'-DDD</u>	<u>53-19-0</u>	<u>0.087</u>			
<u>p,p'-DDD</u>	<u>72-54-8</u>	<u>0.087</u>			
<u>o,p'-DDE</u>	<u>3424-82-6</u>	<u>0.087</u>			
<u>p,p'-DDE</u>	<u>72-55-9</u>	<u>0.087</u>			
<u>o,p'-DDT</u>	<u>789-02-6</u>	<u>0.087</u>			
<u>p,p'-DDT</u>	<u>50-29-3</u>	<u>0.087</u>			
<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>8.2</u>	<u>ND</u>		<u>0.00609</u>
<u>Dibenz(a,e)pyrene</u>	<u>192-65-4</u>	<u>NA</u>			
<u>1,2-Dibromo-3-chloropropane</u>	<u>96-12-8</u>	<u>15</u>	<u>ND</u>		<u>0.000987</u>

<u>Regulated Constituent</u> <u>Common Name</u>	<u>CAS Number</u>	<u>Non WW</u>	<u>Analytical Results</u>		
		<u>Standard</u>	<u>mg/kg or as</u> <u>mg/l TCLP</u>	<u>Concn,</u> <u>mg/kg</u>	<u>Concn, mg/l</u> <u>(TCLP)</u>
<u>1,2-Dibromoethane/Ethylene dibromide</u>	<u>106-93-4</u>	<u>15</u>	<u>ND</u>		<u>0.00646</u>
<u>Dibromomethane</u>	<u>74-95-3</u>	<u>15</u>	<u>ND</u>		<u>0.000645</u>
<u>m-Dichlorobenzene</u>	<u>541-73-1</u>	<u>6.0</u>	<u>ND</u>		<u>0.00556</u>
<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>6.0</u>	<u>ND</u>		<u>0.00530</u>
<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>6.0</u>	<u>ND</u>		<u>0.00530</u>
<u>Dichlorodifluoromethane</u>	<u>75-71-8</u>	<u>7.2</u>	<u>ND</u>		<u>0.000605</u>
<u>1,1-Dichloroethane</u>	<u>75-34-3</u>	<u>6.0</u>	<u>ND</u>		<u>0.000588</u>
<u>1,2-Dichloroethane</u>	<u>107-06-2</u>	<u>6.0</u>	<u>ND</u>		<u>0.000537</u>
<u>1,1-Dichloroethylene</u>	<u>75-35-4</u>	<u>6.0</u>	<u>ND</u>		<u>0.000997</u>
<u>trans-1,2-Dichloroethylene</u>	<u>156-60-5</u>	<u>30</u>	<u>ND</u>		<u>0.001</u>
<u>2,4-Dichlorophenol</u>	<u>120-83-2</u>	<u>14</u>	<u>ND</u>		<u>0.00294</u>
<u>2,6-Dichlorophenol</u>	<u>87-65-0</u>	<u>14</u>	<u>ND</u>		<u>0.00761</u>
<u>2,4-Dichlorophenoxyacetic acid/2,4-D</u>	<u>94-75-7</u>	<u>10</u>			
<u>1,2-Dichloropropane</u>	<u>78-87-5</u>	<u>18</u>	<u>ND</u>		<u>0.000645</u>
<u>cis-1,3-Dichloropropylene</u>	<u>10061-01-5</u>	<u>18</u>	<u>ND</u>		<u>0.000407</u>
<u>trans-1,3-Dichloropropylene</u>	<u>10061-02-6</u>	<u>18</u>	<u>ND</u>		<u>0.000659</u>
<u>Dieldrin</u>	<u>60-57-1</u>	<u>0.13</u>			
<u>Diethylene glycol, dicarbamate</u>	<u>5952-26-1</u>	<u>1.4</u>			
<u>Diethyl phthalate</u>	<u>84-66-2</u>	<u>28</u>	<u>0.0123</u>		<u>0.00881</u>
<u>p-Dimethylaminoazobenzene</u>	<u>60-11-7</u>	<u>NA</u>			<u>0.00809</u>
<u>2,4-Dimethyl phenol</u>	<u>105-67-9</u>	<u>14</u>	<u>ND</u>		<u>0.0404</u>
<u>Dimethyl phthalate</u>	<u>131-11-3</u>	<u>28</u>	<u>ND</u>		<u>0.00576</u>
<u>Dimetilan</u>	<u>644-64-4</u>	<u>1.4</u>			
<u>Di-n-butyl phthalate</u>	<u>84-74-2</u>	<u>28</u>			
<u>1,4-Dinitrobenzene</u>	<u>100-25-4</u>	<u>2.3</u>			
<u>4,6-Dinitro-o-cresol</u>	<u>534-52-1</u>	<u>160</u>			
<u>2,4-Dinitrophenol</u>	<u>51-28-5</u>	<u>160</u>	<u>ND</u>		<u>0.231</u>
<u>2,4-Dinitrotoluene</u>	<u>121-14-2</u>	<u>140</u>	<u>ND</u>		<u>0.00530</u>
<u>2,6-Dinitrotoluene</u>	<u>606-20-2</u>	<u>28</u>	<u>ND</u>		<u>0.00827</u>
<u>Di-n-octyl phthalate</u>	<u>117-84-0</u>	<u>28</u>			
<u>Di-n-propylnitrosamine</u>	<u>621-64-7</u>	<u>14</u>			
<u>1,4-Dioxane</u>	<u>123-91-1</u>	<u>170</u>			
<u>Diphenylamine (difficult to distinguish from diphenylnitrosamine)</u>	<u>122-39-4</u>	<u>13</u>			
<u>Diphenylnitrosamine (difficult to distinguish from diphenylamine)</u>	<u>86-30-6</u>	<u>13</u>	<u>ND</u>		<u>0.0235</u>
<u>1,2-Diphenylhydrazine</u>	<u>122-66-7</u>	<u>NA</u>			
<u>Disulfoton</u>	<u>298-04-4</u>	<u>6.2</u>			
<u>Dithiocarbamates (total)</u>	<u>137-30-4</u>	<u>28</u>			
<u>Endosulfan I</u>	<u>959-98-8</u>	<u>0.066</u>			

<u>Regulated Constituent</u> <u>Common Name</u>	<u>CAS Number</u>	<u>Non WW</u>	<u>Analytical Results</u>		
		<u>Standard</u>	<u>Concn,</u>	<u>Concn, mg/l</u>	<u>Detection</u>
		<u>mg/kg or as</u>	<u>mg/kg</u>	<u>(TCLP)</u>	<u>Limit mg/kg</u>
		<u>mg/l TCLP</u>			<u>or mg/l</u>
<u>Endosulfan II</u>	<u>33213-65-9</u>	<u>0.13</u>			
<u>Endosulfan sulfate</u>	<u>1031-07-8</u>	<u>0.13</u>			
<u>Endrin</u>	<u>72-20-8</u>	<u>0.13</u>			
<u>Endrin aldehyde</u>	<u>7421-93-4</u>	<u>0.13</u>			
<u>EPTC</u>	<u>759-94-4</u>	<u>1.4</u>			
<u>Ethyl acetate</u>	<u>141-78-6</u>	<u>33</u>			
<u>Ethyl benzene</u>	<u>100-41-4</u>	<u>10</u>	<u>ND</u>		<u>0.000729</u>
<u>Ethyl cyanide/Propanenitrile</u>	<u>107-12-0</u>	<u>360</u>			
<u>Ethyl ether</u>	<u>60-29-7</u>	<u>160</u>			
<u>bis(2-Ethylhexyl) phthalate</u>	<u>117-81-7</u>	<u>28</u>	<u>ND</u>		<u>0.0640</u>
<u>Ethyl methacrylate</u>	<u>97-63-2</u>	<u>160</u>	<u>ND</u>		<u>0.000391</u>
<u>Ethylene oxide</u>	<u>75-21-8</u>	<u>NA</u>			
<u>Famphur</u>	<u>52-85-7</u>	<u>15</u>			
<u>Fluoranthene</u>	<u>206-44-0</u>	<u>3.4</u>	<u>0.0170</u>		<u>0.00443</u>
<u>Fluorene</u>	<u>86-73-7</u>	<u>3.4</u>	<u>ND</u>		<u>0.00628</u>
<u>Formetanate hydrochloride</u>	<u>23422-53-9</u>	<u>1.4</u>			
<u>Formparanate</u>	<u>17702-57-7</u>	<u>1.4</u>			
<u>Heptachlor</u>	<u>76-44-8</u>	<u>0.066</u>			
<u>Heptachlor epoxide</u>	<u>1024-57-3</u>	<u>0.066</u>			
<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>10</u>	<u>ND</u>		<u>0.00554</u>
<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	<u>5.6</u>	<u>ND</u>		<u>0.00662</u>
<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>	<u>2.4</u>	<u>ND</u>		<u>0.130</u>
<u>HxCDDs (All</u>	<u>NA</u>	<u>0.001</u>			
<u>Hexachlorodibenzo-p-dioxins)</u>					
<u>HxCDFs (All</u>	<u>NA</u>	<u>0.001</u>			
<u>Hexachlorodibenzo-furans)</u>					
<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>30</u>	<u>ND</u>		<u>0.00804</u>
<u>Hexachloropropylene</u>	<u>1888-71-7</u>	<u>30</u>	<u>ND</u>		<u>0.00675</u>
<u>Indeno (1,2,3-c,d) pyrene</u>	<u>193-39-5</u>	<u>3.4</u>	<u>ND</u>		<u>0.00526</u>
<u>Iodomethane</u>	<u>74-88-4</u>	<u>65</u>	<u>ND</u>		<u>0.000814</u>
<u>Isobutyl alcohol</u>	<u>78-83-1</u>	<u>170</u>			
<u>Isodrin</u>	<u>465-73-6</u>	<u>0.066</u>			
<u>Isolan</u>	<u>119-38-0</u>	<u>1.4</u>			
<u>Isosafrole</u>	<u>120-58-1</u>	<u>2.6</u>	<u>ND</u>		<u>0.0176</u>
<u>Kepone</u>	<u>143-50-0</u>	<u>0.13</u>			
<u>Methacrylonitrile</u>	<u>126-98-7</u>	<u>84</u>			
<u>Methanol</u>	<u>67-56-1</u>	<u>0.75 mg/l</u>			
		<u>TCLP</u>			
<u>Methapyrilene</u>	<u>91-80-5</u>	<u>1.5</u>	<u>ND</u>		<u>0.112</u>
<u>Methiocarb</u>	<u>2032-65-7</u>	<u>1.4</u>			
<u>Methomyl</u>	<u>16752-77-5</u>	<u>0.14</u>			
<u>Methoxychlor</u>	<u>72-43-5</u>	<u>0.18</u>			
<u>3-Methylcholanthrene</u>	<u>56-49-5</u>	<u>15</u>	<u>ND</u>		<u>0.0232</u>

<u>Regulated Constituent</u> <u>Common Name</u>	<u>CAS Number</u>	<u>Non WW</u>	<u>Analytical Results</u>		
		<u>Standard</u>	<u>Concn,</u>	<u>Concn, mg/l</u>	<u>Detection</u>
		<u>mg/kg or as</u>	<u>mg/kg</u>	<u>(TCLP)</u>	<u>Limit mg/kg</u>
		<u>mg/l TCLP</u>			<u>or mg/l</u>
<u>4,4-Methylene bis(2-chloroaniline)</u>	<u>101-14-4</u>	<u>30</u>			
<u>Methylene chloride</u>	<u>75-09-2</u>	<u>30</u>	<u>0.00158</u>		<u>0.000545</u>
<u>Methyl ethyl ketone</u>	<u>78-93-3</u>	<u>36</u>			
<u>Methyl isobutyl ketone</u>	<u>108-10-1</u>	<u>33</u>	<u>ND</u>		<u>0.000923</u>
<u>Methyl methacrylate</u>	<u>80-62-6</u>	<u>160</u>	<u>ND</u>		<u>0.000686</u>
<u>Methyl methansulfonate</u>	<u>66-27-3</u>	<u>NA</u>			
<u>Methyl parathion</u>	<u>298-00-0</u>	<u>4.6</u>			
<u>Metolcarb</u>	<u>1129-41-5</u>	<u>1.4</u>			
<u>Mexacarbate</u>	<u>315-18-4</u>	<u>1.4</u>			
<u>Molinate</u>	<u>2212-67-1</u>	<u>1.4</u>			
<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.00072</u>	<u>ND</u>		<u>0.000441</u>
<u>2-Naphthylamine</u>	<u>91-59-8</u>	<u>NA</u>			<u>0.0354</u>
<u>o-Nitroaniline</u>	<u>88-74-4</u>	<u>14</u>	<u>ND</u>		<u>0.00565</u>
<u>p-Nitroaniline</u>	<u>100-01-6</u>	<u>28</u>	<u>ND</u>		<u>0.00750</u>
<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>14</u>	<u>ND</u>		<u>0.00686</u>
<u>5-Nitro-o-toluidine</u>	<u>99-55-8</u>	<u>28</u>			
<u>o-Nitrophenol</u>	<u>88-75-5</u>	<u>13</u>	<u>ND</u>		<u>0.00796</u>
<u>p-Nitrophenol</u>	<u>100-02-7</u>	<u>29</u>	<u>ND</u>		<u>0.0277</u>
<u>N-Nitrosodiethylamine</u>	<u>55-18-5</u>	<u>28</u>	<u>ND</u>		<u>0.0106</u>
<u>N-Nitrosodimethylamine</u>	<u>62-75-9</u>	<u>2.3</u>	<u>ND</u>		<u>0.0199</u>
<u>N-Nitroso-di-n-butylamine</u>	<u>924-16-3</u>	<u>17</u>	<u>ND</u>		<u>0.00765</u>
<u>N-Nitrosomethylethylamine</u>	<u>10595-95-6</u>	<u>2.3</u>	<u>ND</u>		<u>0.0213</u>
<u>N-Nitrosomorpholine</u>	<u>59-89-2</u>	<u>2.3</u>	<u>ND</u>		<u>0.00752</u>
<u>N-Nitrosopiperidine</u>	<u>100-75-4</u>	<u>35</u>	<u>ND</u>		<u>0.0109</u>
<u>N-Nitrosopyrrolidine</u>	<u>930-55-2</u>	<u>35</u>	<u>ND</u>		<u>0.00784</u>
<u>Oxamyl</u>	<u>23135-22-0</u>	<u>0.28</u>			
<u>Parathion</u>	<u>56-38-2</u>	<u>4.6</u>			
<u>Total PCBs (sum of all PCB isomers, or all Aroclors)</u>	<u>1336-36-3</u>	<u>10</u>			
<u>Pebulate</u>	<u>1114-71-2</u>	<u>1.4</u>			
<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>10</u>	<u>ND</u>		<u>0.00496</u>
<u>PeCDDs (All Pentachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.001</u>			
<u>PeCDFs (All Pentachlorodibenzo-furans)</u>	<u>NA</u>	<u>0.001</u>			
<u>Pentachloroethane</u>	<u>76-01-7</u>	<u>6.0</u>	<u>ND</u>		<u>0.0109</u>
<u>Pentachloronitrobenzene</u>	<u>82-68-8</u>	<u>4.8</u>	<u>ND</u>		<u>0.0368</u>
<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>7.4</u>	<u>ND</u>		<u>0.179</u>
<u>Phenacetin</u>	<u>62-44-2</u>	<u>16</u>	<u>ND</u>		<u>0.00919</u>
<u>Phenanthrene</u>	<u>85-01-8</u>	<u>5.6</u>	<u>ND</u>		<u>0.00567</u>
<u>Phenol</u>	<u>108-95-2</u>	<u>6.2</u>	<u>ND</u>		<u>0.00920</u>
<u>o-Phenylenediamine</u>	<u>95-54-5</u>	<u>5.6</u>			
<u>Phorate</u>	<u>298-02-2</u>	<u>4.6</u>			

<u>Regulated Constituent</u> <u>Common Name</u>	<u>CAS Number</u>	<u>Non WW</u>	<u>Analytical Results</u>		
		<u>Standard</u>	<u>Concn,</u>	<u>Concn, mg/l</u>	<u>Detection</u>
		<u>mg/kg or as</u>	<u>mg/kg</u>	<u>(TCLP)</u>	<u>Limit mg/kg</u>
		<u>mg/l TCLP</u>			<u>or mg/l</u>
<u>Phthalic acid</u>	<u>100-21-0</u>	<u>28</u>			
<u>Phthalic anhydride</u>	<u>85-44-9</u>	<u>28</u>			
<u>Physostigmine</u>	<u>57-47-6</u>	<u>1.4</u>			
<u>Physostigmine salicylate</u>	<u>57-64-7</u>	<u>1.4</u>			
<u>Promecarb</u>	<u>2631-37-0</u>	<u>1.4</u>			
<u>Pronamide</u>	<u>23950-58-5</u>	<u>1.5</u>			
<u>Propham</u>	<u>122-42-9</u>	<u>1.4</u>			
<u>Propoxur</u>	<u>114-26-1</u>	<u>1.4</u>			
<u>Prosulfocarb</u>	<u>52888-80-9</u>	<u>1.4</u>			
<u>Pyrene</u>	<u>129-00-0</u>	<u>8.2</u>			
<u>Pyridine</u>	<u>110-86-1</u>	<u>16</u>	<u>ND</u>		<u>0.0230</u>
<u>Safrole</u>	<u>94-59-7</u>	<u>22</u>	<u>ND</u>		<u>0.00842</u>
<u>Silvex/2,4,5-TP</u>	<u>93-72-1</u>	<u>7.9</u>			
<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>14</u>	<u>ND</u>		<u>0.00513</u>
<u>TCDDs (All Tetrachlorodi-</u>	<u>NA</u>	<u>0.001</u>			
<u>benzo-p-dioxins)</u>					
<u>TCDFs (All</u>	<u>NA</u>	<u>0.001</u>			
<u>Tetrachlorodibenzofurans)</u>					
<u>1,1,1,2-Tetrachloroethane</u>	<u>630-20-6</u>	<u>6.0</u>	<u>ND</u>		<u>0.000696</u>
<u>1,1,2,2-Tetrachloroethane</u>	<u>79-34-5</u>	<u>6.0</u>	<u>ND</u>		<u>0.000868</u>
<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>6.0</u>	<u>ND</u>		<u>0.00105</u>
<u>2,3,4,6-Tetrachlorophenol</u>	<u>58-90-2</u>	<u>7.4</u>	<u>ND</u>		<u>0.0179</u>
<u>Thiodicarb</u>	<u>59669-26-0</u>	<u>1.4</u>			
<u>Thiophanate-methyl</u>	<u>23564-05-8</u>	<u>1.4</u>			
<u>Tirpate</u>	<u>26419-73-8</u>	<u>0.28</u>			
<u>Toluene</u>	<u>108-88-3</u>	<u>10</u>	<u>ND</u>		<u>0.000497</u>
<u>Toxaphene</u>	<u>8001-35-2</u>	<u>2.6</u>			
<u>Triallate</u>	<u>2303-17-5</u>	<u>1.4</u>			
<u>Tribromomethane/Bromoform</u>	<u>75-25-2</u>	<u>15</u>			
<u>1,2,4-Trichlorobenzene</u>	<u>120-82-1</u>	<u>19</u>	<u>ND</u>		<u>0.00696</u>
<u>1,1,1-Trichloroethane</u>	<u>71-55-6</u>	<u>6.0</u>	<u>ND</u>		<u>0.000737</u>
<u>1,1,2-Trichloroethane</u>	<u>79-00-5</u>	<u>6.0</u>	<u>ND</u>		<u>0.000727</u>
<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>6.0</u>	<u>ND</u>		<u>0.000935</u>
<u>Trichloromonofluoromethane</u>	<u>75-69-4</u>	<u>30</u>			
<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>7.4</u>	<u>ND</u>		<u>0.00850</u>
<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>7.4</u>	<u>ND</u>		<u>0.00463</u>
<u>2,4,5-Trichlorophenoxyacetic</u>	<u>93-76-5</u>	<u>7.9</u>			
<u>acid/2,4,5-T</u>					
<u>1,2,3-Trichloropropane</u>	<u>96-18-4</u>	<u>30</u>	<u>ND</u>		<u>0.000847</u>
<u>1,1,2-Trichloro-1,2,2-</u>	<u>76-13-1</u>	<u>30</u>	<u>ND</u>		<u>0.000761</u>
<u>trifluoroethane</u>					
<u>Triethylamine</u>	<u>101-44-8</u>	<u>1.5</u>			
<u>tris-(2,3-Dibromopropyl)</u>	<u>126-72-7</u>	<u>0.10</u>			
<u>phosphate</u>					

<u>Regulated Constituent</u> <u>Common Name</u>	<u>CAS Number</u>	<u>Non WW</u>	<u>Analytical Results</u>		
		<u>Standard</u>	<u>Concn,</u>	<u>Concn, mg/l</u>	<u>Detection</u>
		<u>mg/kg or as</u>	<u>mg/kg</u>	<u>(TCLP)</u>	<u>Limit mg/kg</u>
		<u>mg/l TCLP</u>			<u>or mg/l</u>
<u>Vernolate</u>	<u>1929-77-7</u>	<u>1.4</u>			
<u>Vinyl chloride</u>	<u>75-01-4</u>	<u>6.0</u>	<u>ND</u>		<u>0.00115</u>
<u>Xylenes-mixed isomers (sum of</u> <u>o-, m-, and p-xylene</u> <u>concentrations)</u>	<u>1330-20-7</u>	<u>30</u>	<u>ND</u>		<u>0.00153</u>
<u>Antimony</u>	<u>7440-36-0</u>	<u>2.1 mg/l</u> <u>TCLP</u>		<u>0.0065</u>	<u>0.00309</u>
<u>Arsenic</u>	<u>7440-38-2</u>	<u>5.0 mg/l</u> <u>TCLP</u>		<u>0.0145</u>	<u>0.00156</u>
<u>Barium</u>	<u>7440-39-3</u>	<u>7.6 mg/l</u> <u>TCLP</u>		<u>0.159</u>	<u>0.00052</u>
<u>Beryllium</u>	<u>7440-41-7</u>	<u>0.014 mg/l</u> <u>TCLP</u>		<u>0.0079</u>	<u>0.00007</u>
<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.19 mg/l</u> <u>TCLP</u>		<u>ND</u>	<u>0.0003</u>
<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>0.86 mg/l</u> <u>TCLP</u>		<u>0.0222</u>	<u>0.00109</u>
<u>Cyanides (Total)¹</u>	<u>57-12-5</u>	<u>590</u>			
<u>Cyanides (Amenable)¹</u>	<u>57-12-5</u>	<u>30</u>			
<u>Fluoride²</u>	<u>16984-48-8</u>	<u>NA</u>			
<u>Lead</u>	<u>7439-92-1</u>	<u>0.37 mg/l</u> <u>TCLP</u>		<u>0.0043</u>	<u>0.00118</u>
<u>Mercury--Nonwastewater from</u> <u>Retort</u>	<u>7439-97-6</u>	<u>0.20 mg/l</u> <u>TCLP</u>			
<u>Mercury--All Others</u>	<u>7439-97-6</u>	<u>0.025 mg/l</u> <u>TCLP</u>		<u>ND</u>	<u>0.00006</u>
<u>Nickel</u>	<u>7440-02-0</u>	<u>5.0 mg/l</u> <u>TCLP</u>		<u>0.379</u>	<u>0.00168</u>
<u>Selenium</u>	<u>7782-49-2</u>	<u>0.16 mg/l</u> <u>TCLP</u>		<u>ND</u>	<u>0.00388</u>
<u>Silver</u>	<u>7440-22-4</u>	<u>0.30 mg/l</u> <u>TCLP</u>		<u>ND</u>	<u>0.00087</u>
<u>Sulfide</u>	<u>18496-25-8</u>	<u>NA</u>			
<u>Thallium</u>	<u>7440-28-0</u>	<u>0.078 mg/l</u> <u>TCLP</u>		<u>ND</u>	<u>0.0048</u>
<u>Vanadium²</u>	<u>7440-62-2</u>	<u>0.23 mg/l</u> <u>TCLP</u>		<u>0.0486</u>	<u>0.00059</u>
<u>Zinc²</u>	<u>7440-66-6</u>	<u>5.3 mg/l</u> <u>TCLP</u>		<u>0.0111</u>	<u>0.00233</u>

Notes:

CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with it's salts and/or esters, the CAS number is given for the parent compound only.44.

Concentration standards for wastewaters are expressed in mg/l and are based on analysis of composite samples.

Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of 40 CFR part 264, subpart O, or 40 CFR part 265, subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in Sec. 268.40(d). All concentration standards for nonwastewaters are based on analysis of grab samples.

Universal Treatment Standards
Frit Test Results

ND means Non-District, Concn means concentration, and TCLP means Toxicity Characteristic Leaching Procedure.

¹ Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010 or 9012, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in 40 CFR 260.11, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

² These constituents are not "underlying hazardous constituents" in characteristic wastes, according to the definition at Sec. 268.2(i).
Source: Global Energy 2001c.

