

Kentucky Department of Fish and Wildlife Resources
Frankfort, KY
Page 1 of 2

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COMMONWEALTH OF KENTUCKY
DEPARTMENT OF FISH AND WILDLIFE RESOURCES
C. THOMAS BENNETT, COMMISSIONER



November 30, 2001

Mr. Alex Barber
Commissioner's Office
Department for Environmental Protection
14 Reilly Road
Frankfort, KY 40601

RE: Project No. SERO2001-101, Kentucky
Pioneer Integrated Gasification Combined Cycle
(IGCC) Demonstration Project, Draft
Environmental Impact Statement (DEIS)
(DOE/EIS-0318), Clark County, Kentucky.

Dear Mr. Barber:

Members of my staff have reviewed the above-referenced DEIS. Accordingly, we offer the following comments and recommendations.

While the DEIS covers most of the areas of potential impact, there are several areas where the Kentucky Department of Fish and Wildlife Resources (KDFWR) feels the document is deficient. Those areas are:

- 1) There is no discussion regarding impingement and/or entrainment of aquatic resources. Such losses can have significant impacts on local aquatic resources depending upon the design of water intakes. KDFWR recommends that such studies be undertaken to determine the significance of such losses.
- 2) The report does acknowledge the possible presence of freshwater mussels and that a thermal plume will result from the discharge of water used in the power generation process. However, there is no discussion if the thermal plume will have any impacts on non-motile aquatic organisms such as freshwater mussels. Data from the Ohio River suggests that thermal plumes from power generation stations are one of the primary reasons for the decline of the mussel resource in that body of water. KDFWR recommends that an evaluation of the thermal plume impact on non-motile aquatic species be conducted.

1/08

2/08

Members of my staff will be available to discuss our comments with you or anyone in your agency. The point of contact with KDFWR will be Wayne L. Davis, Environmental Section Chief (502/564-7109).



Arnold L. Mitchell Bldg. #1 Game Farm Road Frankfort, Ky 40601
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Comment No. 1

Issue Code: 08

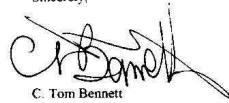
National Pollution Discharge Elimination System (NPDES) regulations found in Title 40 Part 125 of the *Code of Federal Regulations* (CFR) address cooling water intake structures for new facilities. The final rule was published on December 18, 2001, and implemented in Section 316(b) of the *Clean Water Act* for new facilities that use water withdrawn from rivers and streams and other waters of the United States for cooling purposes (EPA 2001). The regulations establish national technology-based performance requirements applicable to the location, design, construction, and capacity of cooling water intake structures at new facilities. The purpose of the regulations are to reduce impingement and entrainment of aquatic organisms and preserve the ecosystems they inhabit. The regulations apply to new and stand-alone facilities that use cooling water intake structures with designed intake flows of greater than 7.6 MLD (2 MGD) and that use at least 25 percent of water withdrawn for cooling purposes. If a new facility has or requires an NPDES permit but does not meet the 7.6 MLD (2 MGD) intake flow threshold or uses less than 25 percent of its water for cooling water purposes, the permit authority will implement Section 316(b) on a case-by-case basis, using the best professional judgment. An example of a new facility is a facility constructed on the same property as an existing facility, but is a separate and independent industrial operation. The Kentucky Pioneer IGCC Demonstration Project meets the definition of a new facility. Currently, it is projected that the facility would withdraw a total of 15.2 MLD (4 MGD) of surface water for turbine condenser cooling and process and cooling water makeup. Thus, 40 CFR 125 regulations would apply. Compliance with the regulations in the design, construction, and capacity of cooling water intake structures will minimize adverse environmental impacts to aquatic organisms and their ecosystems.

**Kentucky Department of Fish and Wildlife Resources
Frankfort, KY
Page 2 of 2**

Page Two
Mr. Barber
November 30, 2001

We appreciate the opportunity to comment.

Sincerely,



C. Tom Bennett
Commissioner

CTB/WLD/kh

cc: Edwin F. Crowell, Asst. Director, Division of Fisheries
Lewis E. Kornman, Northeastern Fishery District Biologist
Lee A. Barclay, USEFWS, Cookeville, TN
Environmental Section Files

Comment No. 2

Issue Code: 08

The Kentucky Natural Resources and Environmental Protection Cabinet has established regulatory limits relative to the Kentucky River, which explicitly provide a mechanism to establish thermal impact parameters. Kentucky regulations (401 Kentucky Administration Regulations [KAR] 5:031) contain specific, seasonal (generally month to month) temperature limits which permitted effluent limits are based. Project-specific information will not be available until an application for a KPDES permit is submitted approximately 1 year (minimum time is 180 days) before plant operation begins. However, effluent temperature will be limited and established to avoid impacting the monthly Kentucky River receiving stream limits. Use of the bounding analysis in Section 5.9, Ecological Resources, of the EIS, indicates that benthic organisms most likely to be affected would be in close proximity to the discharge port. Mortality of benthic organisms may occur along with a potential shift in species' populations or lack of recolonization of the affected area. A statement to this effect has been added to Section 5.9, Ecological Resources. Conditions set by the KPDES permit will be followed, including any recommendations for further evaluation.