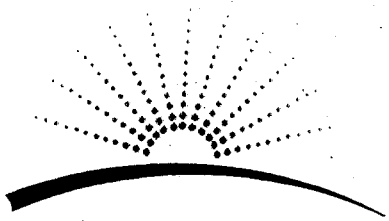


012 8/1/02



Kentucky Mountain POWER

NEW ENERGY FOR EASTERN KENTUCKY

August 1, 2002

Stephanie Bell
Kentucky State Board on Electrical
Generation and Transmission Siting
211 Sower Boulevard
P.O. Box 615
Frankfort, Kentucky 40602

Re: Case No. 2002-00149

Dear Ms. Bell:

Enclosed is Kentucky Mountain Power, LLC's ("KMP") response to Pauline Stacy's Data Request in the matter of KMP's application for a certificate to construct a power plant in Knott County Kentucky. The original response was filed electronically as per your request on Wednesday, July 31, 2002. If you have any questions concerning this matter, please don't hesitate to contact me at either (859) 422-5562 or (859) 492-2323.

Sincerely,

Peter C. Brown
Director of Contract Administration
EnviroPower, LLC

cc: Randy Bird
Robin Morecroft

308-KMP-Bell-Siting-Stacy-Data-Response-Filing-Letter

COMMONWEALTH OF KENTUCKY
BEFORE THE KENTUCKY STATE BOARD ON
ELECTRIC GENERATION AND TRANSMISSION SITING

In the Matter of:

THE APPLICATION OF KENTUCKY)	
MOUNTAIN POWER, LLC /)	
ENVIROPOWER, LLC FOR A)	CASE NO. 2002-00149
MERCHANT POWER PLANT)	
CONSTRUCTION CERTIFICATE IN)	
KNOTT COUNTY, KENTUCKY)	
NEAR TALCUM)	

KENTUCKY MOUNTAIN POWER, LLC'S RESPONSE TO POTENTIAL
INTERVENOR PAULINE STACY'S FIRST DATA REQUEST

COMES NOW Kentucky Mountain Power, LLC ("KMP") and responds to potential Intervenor Pauline Stacy's ("Potential Intervenor") First Data Request ("Request") as follows:

OBJECTIONS

KMP objects to the Request as improper since Potential Intervenor has not yet been granted intervenor status by the Kentucky State Board on Electric Generation and Transmission Siting ("Board"). Notwithstanding the above objection, shall tender the following responses the Request and requests that the Board treats this response as KMP's official response to the Request should the Board grant intervenor status to the Potential Intervenor.

RESPONSE

1. A description of the route(s) that will be used for gaining access to the proposed plant site:
 - a. For construction equipment, material and personnel;

b. For fuel and supply delivery, personnel and other traffic to and from the facility once it is in operation.

Response: All contractors, vendors, construction personnel and KMP employees/consultants will be instructed to use the existing haul road accessible off of Kentucky Route 80 at Talcum (the "Road") for ingress and egress to the KMP plant site until the new bridge and road, to be constructed by the Kentucky Department of Transportation, is completed ("Access Road"). When the KMP power plant construction is completed, KMP anticipates all access to the plant site, unless otherwise indicated in this Response, will be via the Access Road.

2. A description of the measures that are proposed and will be implemented to prevent the use of unauthorized coal haul roads or other access routes or roads to gain access to the power plant site.

Response: While KMP has no authority to direct the use of any coal haul roads or access routes it neither owns or controls, KMP will request that Starfire Mining Company refuse admission to all non-mining plant construction/operation related vehicle traffic over its haul/access roads, except in emergency situations. Further, KMP has no legal authority to direct any person's use of any public road, but will instruct all such power plant related construction to use the Road and Access Road as indicated in Response to Request No. 1.

3. A description of the route(s) that will be used for delivery of coal, waste coal and coal waste material to the proposed power plant site, including but not limited to route(s) that will be used to deliver such material from the Starfire mining complex.

Response: Coal and coal waste material will be delivered to the power plant site via the Access Road. To the extent coal or coal waste material is delivered to the

plant site from Starfire, KMP anticipates such material will be transported directly from Starfire's mine across the proposed industrial park, indicated in KMP's Application to construct a power plant in Knott County, Kentucky, on either right of ways reserved by KMP or on public roads suitable for heavy haul traffic.

4. A description of the transmission line routing for all new lines associated with the KMP project, including those to be transferred to AEP, and including:

- a. An assessment of alternative routes considered and basis for selection of the preferred route(s) for each line;
- b. A description of the status of right-of-way acquisition for each line;
- c. A description of impacts on properties associated with the line construction, operation and maintenance; and
- d. A site assessment report for the transmission line routing.

Response: Kentucky Power Company (AEP) will interconnect with KMP at the new AEP Talcum 138kv-switching substation on the plant site with three 138kv transmission lines. A general line routing map has been provided to the Board and KMP is in the process of uploading said map to the Board's website.

- a. The transmission routing of new exit circuits from the plant-switching substation is crossing lands that have been previously surface mined and are owned/controlled primarily by large mineral and land holding companies. At the end of the new right-of-ways for the transmission lines, these circuits will enter existing AEP rights-of-way to continue to the Beaver Creek and Hazard substations.

- b. Option agreements have been executed with all property owners controlling right-of-way access across the property the transmission line(s) crosses.
- c. These new circuits have been carefully routed so that there would be minimal impact on future mining operations and KMP.
- d. No site assessment report has been prepared for the transmission line routing. These lines will be owned and operated by AEP, and the Kentucky Public Service Commission will regulate their operation. As such, they do not fall under the definition of a "nonregulated electric transmission line" and KMP is not obligated to file for a certificate from the Board for their construction.

5. A description of where water will be stored on site for facility operation, including the location, size, hazard classification, construction method, and ownership of the structure(s) to be used. For each structure, provide the size of the structure and acre-feet storage, dam breach analysis, monitoring and engineering inspection protocols, and identify whether the structure is existing or proposed, who will be responsible for maintenance, upkeep and repair on the structure(s), who is responsible for compensation for any damage resulting from the failure of the structure(s), whether an insurance policy will be maintained insuring against losses associated with the structure and off-site damage resulting from the structure, and the limits of that policy for property and casualty related to that structure.

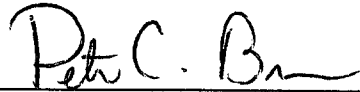
Response: KMP intends to use the current Lick Branch Impoundment ("Reservoir"), as indicated in its Application, for long term storage of water for use in the power plant. The Reservoir will have a holding capacity of approximately 1,400,000,000

gallons when completed and will be owned and maintained by KMP under all applicable governmental rules and regulations. KMP anticipates insuring the Reservoir under the same policies that will insure the remainder of the power plant project against casualty and/or property damage, using industry standard limits and deductibles, unless the relevant insurance markets indicate that a separate policy is warranted. KMP is unable to answer questions regarding legal liability for compensation for structure failure of the Reservoir without knowing the cause thereof. The remainder of the technical information requested is contained in the excerpt from the Summary of the Dam Break Analysis attached to this Response. The entire Report concerning the Dam Break Analysis has been uploaded to the Board's website for the Potential Intervenor's review if necessary.

[CERTIFICATION PAGE TO FOLLOW]

CERTIFICATION

Peter C. Brown, being attorney of record for Kentucky Mountain Power, LLC, certifies that the above responses to Intervenor Pauline Stacy's First Data Request are true and accurate as stated.



Peter C. Brown
Attorney of Record
Kentucky Mountain Power, LLC
2810 Lexington Financial Center
Lexington, Kentucky 40507

COMMONWEALTH OF KENTUCKY

COUNTY OF FAYETTE

The foregoing instrument was subscribed, sworn, to and acknowledged before me this 31st day of July, 2002, by **PETER C. BROWN** as **Attorney of Record** for **Kentucky Mountain Power, LLC**, a Kentucky limited liability company, for and on behalf of said company.



NOTARY PUBLIC

My Commission Expires: 5/7/04

i. **EMBANKMENT CLASSIFICATION**

1.0 **GENERAL**

The Lick Branch reservoir for the Kentucky Mountain Power project is in a remote area located within a strip mine site. The embankment is located on a side hollow of Lick Branch of Balls Fork Creek. The distance from the toe of the dam in the side hollow down to Lick Branch is approximately one-half mile, whereas the distance from the embankment to County Road 1087 is approximately 1 mile. At that locale, Lick Branch flows through a double rectangular culvert under County Road 1087, and ultimately empties into Balls Fork. There are no structures upstream of the County Road. The first structure is just downstream of the County Road and is at elevation 858.9 feet. This structure is a trailer with approximately 2 feet of space between the ground and the floor. The creek in this area is situated at elevation 844.5 feet; therefore, the house sits over 14 feet above the creek level. Based on the remoteness of this structure, and the fact there are no buildings or any roads except a coal haul road and a county road within the area, it was decided to perform a Dams-Break analysis to determine the classification of the embankment structure.

2.0 **SITE DESCRIPTION AND CROSS-SECTIONS**

In order to perform an accurate Dams-Break analysis, an on-ground survey was performed to determine the cross-sections from the toe of the dam to Balls Fork, which is situated downstream of County Road 1087. In addition, the floor elevations of the trailer and the first house downstream of the County Road were determined. The locations of the sections and the cross-sections are shown in Appendix F.

The cross-sections show that the creek is relatively deep throughout the entire length used in this analysis. There is a culvert under the coal haul road which is a 72 inch diameter smooth steel culvert, while the culvert under County Road 1087 is a double 10.5 foot x 7.2 foot concrete culvert. The depth of the culvert invert from the road surface at County Road 1087 is approximately 12.5 feet. The bottom grade of the side hollow in which the embankment is located is about 2%, while the bottom grade of Lick Branch is approximately 1.5%. The bottom grade of the main Balls Fork is approximately 1%.

3.0 DESCRIPTION OF ANALYSIS

A Dams-Break analysis using the National Weather Service program DAMS-BREAK, latest edition, dated 1988, was used to calculate the flow and height of water, assuming a Dams-Break scenario that extends to the location of the County Road. The flow hydrograph of the water flowing down the creek was calculated from the DAMS-BREAK program. As noted earlier, the embankment for the road has a double rectangular concrete culvert beneath it. The water from the Dams-Break analysis was routed through the culvert and over the road utilizing the program HEC-2 to analyze flow through a bridge. The analysis was done to obtain an accurate level of water at the first trailer downstream of the roadway, and the second house that is situated further downstream. The DAMS-BREAK program was utilized to obtain a flow hydrograph to route through the roadway culvert. The flow hydrograph was then input into the HEC-2 flow program, in addition to the characteristics of the roadway and culvert beneath the roadway, and the sections upstream and downstream of the culvert, in order to obtain the flow under and over the road and in the sections below the road where the first structures exist.

Some discussion of the parameters used to perform this Dams-Break analysis is offered. The time to breach recommended by the National Weather Service in the manual for the DAMS-BREAK program as a default value is one-third times the breach height, which is usually the height of the dam. ACER-Technical Memorandum No. 11, dated 1982, recommends a time of breach for rock dams of $0.125 \times 2.5 \times$ breach depth in minutes. A calculation of the time of breach for these analyses indicate the following for this embankment:

- (1) Default in Dams-Break = $\frac{\text{Height of Dam}}{3} = \frac{1171'-945'}{3} = 75.0$ Minutes
- (2) ACER-Technical Memorandum = $0.125 \times \text{Height of Breach} \times 2.5 = 0.125 (1171'-950') \times 2.5 = 69$ Minutes

It will be noted that these methods of calculating time of break give very close results. A value of 75 minutes was used in this analysis. The DAMS-BREAK program calculates the width of breach from the geometry of the dam and the section of the original valley at the dam. The calculated breach width in this analysis is 432 feet. The remainder of the parameters used in the analysis include the surface area of the pool, the volume of the reservoir, and the cross-sections

of the valley downstream of the dam. These values are straight forward from the design of the dam. These values are:

TABLE 1
VALUES

PARAMETER	VALUE
Surface Area	69.0 acres
Total Reservoir Volume	6111.0 ac-ft

In this analysis, it was considered that the entire volume upstream of the dam (from the crest down) is filled with water, and no slurry exists. This is an extremely conservative analysis, since a portion of the pool at any given time will be slurry, which has a relatively high viscosity and does not possess the ability to travel as far downstream in the event of a breach. However, this gives a very conservative approach and a worse case scenario. In addition, this dam is constructed of large rock which would be difficult to move and the time to breach would be longer than calculated above.

Utilizing these parameters, the surveyed cross-sections downstream of the dam, and the computer program referenced in the foregoing text, a Dams-Break analysis was performed. A depth of flow in each of the sections was determined, and an inundation map was prepared. The DAMS-BREAK program was used to generate a flow hydrograph at the location of County Road 1087. This flow hydrograph was then routed through the 10.5 foot x 7.2 foot double culvert and over the road using the program HEC-2. The cross-sections immediately upstream and downstream of the road were used in this analysis to determine the elevation of water at the trailer locations. Table 2 shows the flow characteristics at each cross-section.

TABLE 2
CHARACTERISTICS OF FLOW

0.00	14.0	959.0
0.31	12.5	930.5
0.38	15.0	918.0
0.41	15.7	916.7
0.46	12.3	907.3
0.51	12.6	900.6

TABLE 2 (Continued)
 CHARACTERISTICS OF FLOW

STATION (miles)	DEPTH OF WATER (ft)	ELEVATION OF WATER (ft)
0.56	15.5	900.5
0.64	13.0	893.0
0.72	9.5	881.5
0.79	12.4	877.4
0.87	17.2	877.2
0.95	23.2	878.2
1.00	15.1	864.1
1.03	15.6	862.1
1.05	10.1	854.6
1.09	6.8	848.8
1.10	7.3	848.3
1.14	5.0	845.0

The elevation of the trailers has been shown on the appropriate cross-sections in Appendix F. The nearest trailer is at a ground elevation of 858.9 feet. The elevation of the water during a breach will be 854.6 feet. The floor elevation of the first house is 862.5 feet. The flood flow elevation will be only 848.8 feet. Based on this evaluation, it will be noted that the flow in the event of a dam breach, does not reach the trailers or the first house. The flow over-tops the embankment for the County Road, but does not reach a dwelling.

The following is MSHA's definition of hazard potential:

- "a. Low Hazard Potential – Facilities located in rural or agricultural areas where failure would cause only slight damage, such as to farm buildings, forest or agricultural land, or minor roads.
- b. Moderate Hazard Potential – Facilities located in predominantly rural areas where failure may damage isolated homes, main highways, minor railroads or disrupt the use or service of public utilities.
- c. High Hazard Potential – Facilities located where a failure could be reasonably expected to cause loss of life, serious damage to homes,

industrial and commercial buildings, and important utilities, highways and railroads."

The Commonwealth of Kentucky Hazard Classification criteria is as follows:

"a. Class (A) – Low Hazard

This classification may be applied for structures located such that failure would cause loss of the structure itself, but little or no additional damage to other property. Such structures will generally be located in rural or agricultural areas where failure may damage farm buildings other than residences, agricultural lands, or county roads.

b. Class (B) – Moderate Hazard

This classification may be applied for structures located such that failure may cause significant damage to property and project operation, but loss of human life is not envisioned. Such structures will generally be located in predominantly rural agricultural areas where failures may damage isolated homes, main highways or major railroads, or cause interruption of use or service of relatively important public utilities.

c. Class (C) – High Hazard

This classification must be applied for structures located such that failure may cause loss of life, or serious damage to homes, industrial or commercial buildings, important public utilities, main highways or major railroads. This classification must be used if failure would cause probable loss of human life."

Based on these criteria and the results of this engineering analysis, the structure is an MSHA Low Hazard Structure, Commonwealth of Kentucky Class "A" Structure.

4.0 CONCLUSIONS

The Dams-Break analysis performed for this study demonstrates that the reservoir water from a breach does not inundate any dwellings (or any other structures). The water will flow over the County Road, but only for a brief time period in which damage in the vicinity will be minimal. Consequently, there is no probability of loss of life, and only minimal damage to minor roadways will occur if the embankment were to fail. It must be emphasized that the dwellings located downstream from the embankment will not be damaged by a dam breach. It is, therefore, reasonable to classify this dam according to the Kentucky Division of Water Engineering Memorandum No. 5 as a low hazard structure. However, the design storm was assumed to be the six (6) hour PMF with Antecedent Moisture Condition III.