Response to Filing Deficiencies

Case No. 2002-00149

Kentucky Mountain Power Site

Prepared by: Kentucky Mountain Power, LLC
June 7, 2002

Kentucky Mountain POWER
NEW ENERGY FOR EASTERN KENTUCKY

June 7, 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 – Kentucky Mountain Power, LLC

Dear Ms. Bell:

In response to your June 5 letter requesting additional information for the completion of Kentucky Mountain Power, LLC's ("KMP") application for a certificate to construct a merchant electricity generating plant, please see the following:

1. New Table of Contents with citation to appropriate state legislation.
2. Section 8.3.7 was revised to add language stating that there are not qualifying structures within a 2 mile radius of the facility.
3. A) The original legal description provided included a description of the plant site, but failed to include a heading for the same. A separate legal description of the proposed plant site is included.
   B) Section 8.3.4 has been revised to add a map showing all building locations.
4. A) Memorandum addressing additional appraisal of the property adjacent to the plant site.
   B) Noise level analysis is revised to include levels at the property line.

KMP will upload this information onto your website as required. We will also provide your via hand delivery with 10 copies of the same for submission to the Board. Please let me know at

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Phone: (859) 389-8070 • Fax: (859) 389-9980

your earliest convenience if this completes our filing application. 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

Peter C. Brown
Director of Contract Administration
EnviroPower, LLC

cc: Randy Bird

380-KMP-Plant-Siting-Board-Fee-Deviation-Letter

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6.0 Noise Evaluation

The Kentucky Mountain Power project is located on a 4000 acre leasehold in rural Knott County. The plant itself will sit on a 195 acre portion of the leasehold. The plant stack is approximately 555 feet from the nearest adjoining property which is also under Kentucky Mountain Power's leasehold. The closest adjoining property not controlled by Kentucky Mountain Power is approximately 2048 feet from the stack. The nearest residence is over 13,000 feet from the plant location.

All of the property under the leasehold is permitted for surface mining activities including blasting. All properties adjoining the leasehold are either permitted for mining activities or are expected to be permitted for mining activities.

A general study of the noise levels expected to be generated by the plant was conducted by Air, Soil & Water Environmental Consultants. A copy of that study is included in this section of the Application.

Construction Noise Levels

Typical construction noise levels have been evaluated by the EPA[1]. The results of the EPA study are summarized in the first column of the following table. These noise levels represent peak noise generation during the various construction activities. The typical noise levels during the construction process should be significantly lower than the peak levels addressed in the table. The loudest expected construction noise levels are finishing activities at 89dBA measured at 50 feet. The EPA noise levels have been adjusted to reflect the noise impact at the project site boundary (555'), the project lease line (2048') and the nearest residence (13,600'). The noise levels presented in the table below do not consider any attenuation or reduction in noise levels as a result of ground effects or topography. In the case of the Kentucky Mountain Power site this noise attenuation could be significant.

Typical Peak noise Levels From
Construction Activities for Industrial Projects

Construction Activity	Average Sound Level at 50 feet (dBA)[2]	Property Boundary (dBA)	Project Lease Line (dBA)	Nearest Residence (dBA)
Foundations	77	53	45	28
Erection of Major Components	84	63	52	35
Finishing	89	68	57	40

The maximum expected noise level at the nearest residential neighbor to the project will be approximately 40 dBA. This noise level is the equivalent of a library or a quiet home environment and should not be of any measurable impact to the residents. The noise level of

[1] Bolt, Beranek and Newman (Prepared under contract for the U.S. Environmental Protection Agency), Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, December 31, 1971.
[2] Bolt, Beranek and Newman (Prepared under contract for the U.S. Environmental Protection Agency), Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, December 31, 1971.

57dBA at the project lease boundary will be similar to a residential neighborhood or typical conversation levels. The noise level at the plant site property line will be approximately 68 dBA, the equivalent of the noise in an automobile traveling at 50 MPH.

Just before the plant is started up, there will be steam blows to clean the debris from the plant steam systems. Steam blows are typically the loudest noise that occurs during the construction of a steam power plant. After erection and assembly of the plant systems the piping and tubing that take steam from the boiler to the turbine have accumulated dirt, rust, scale and construction debris. The cleaning of these systems is accomplished by temporarily routing the lines to the atmosphere. Steam is vented through these lines in short bursts lasting 2 to 3 minutes each. These steam blows will occur several times daily over the course of several days until the lines are clean.

Steam blows can produce short high intensity noise levels, as high as 130 dBA at a distance of 100 feet. These noise levels will be similar to the noise levels that occur when major blasting is done at the mine currently operating on the site. Unattenuated this noise level will approach 87 dBA at the nearest residence. Typically, silencers are used to reduce the level of the steam blow noise with an expected noise reduction on the order of 30 dBA. Silencers would reduce the noise level to 57 dBA, at the nearest residence, or a noise level for short periods of time equivalent to a large air conditioning unit at 20 feet.

Operating Plant Noise Levels

The finished plant will consist of boilers and a steam turbine enclosed within metal buildings. Typical sound levels for major plant equipment are listed in the following table. The sound levels in the table reflect the sound generated by this equipment without consideration for various sound attenuation methodologies. The noise contribution at the property boundary, lease boundary and nearest residence has been determined for each of the major pieces of equipment.

Operating Equipment	Average Sound Level at 3 feet (dBA)	Property Boundary (dBA)	Project Lease Line (dBA)	Nearest Residence (dBA)
Boiler	65@ 400’	61	50	34
Steam Turbine Generator	65 @ 400’	61	50	34
Boiler Feed Pumps	90 @ 3’	67	55	39
Cooling Tower Cell	65 @ 400’	61	50	34
Gas Compressor	90 @ 3’	45	33	17
Step-up Transformer	85 @ 1’	30	18	2

Based on this analysis, the loudest noise level at the property boundary will be from the boiler feed pumps. At the project lease line the noise level will be 55 dBA while at the nearest residence the noise level will be 39 dBA. These noise levels were developed assuming no attenuation within the plant. However, the boiler feed pumps will be located within an insulated metal building at the plant. A typical prefabricated metal building without insulation will have a noise reduction on the order of 10 dB. Thus the 39 dBA noise level will be closer to 30 dBA or equivalent to a soft whisper.

Appendix A

Common Sound Levels/Sources and Subjective Human Responses

Thresholds/ Noise Sources	Sound Level (dBA)	Subjective Evaluations [1]	Possible Effects on Humans
Human threshold of pain Carrier jet takeoff (50 ft)	140	Deafening	Continuous exposure to levels above 70 can cause hearing loss in majority of population
Siren (100 ft) Loud rock band	130		
Jet takeoff (200 ft) Auto horn (3 ft)	120		
Chain saw Noisy snowmobile	110		
Lawnmower (3 ft) Noisy motorcycle (50 ft)	100	Very Loud	
Heavy truck (50 ft)	90		
Pneumatic drill (50 ft) Busy urban street, daytime	80	Loud	
Normal automobile at 50 mph Vacuum cleaner (3 ft)	70		Speech interference
Large air conditioning unit (20 ft) Conversation (3 ft)	60	Moderate	
Quiet residential area Light auto traffic (100 ft)	50		Sleep Interference
Library Quiet home	40	Faint	
Soft whisper (15 ft)	30		
Slight rustling of leaves	20	Very Faint	
Broadcast studio	10		
Threshold of human hearing	0		

[1] Note that both the subjective evaluations and the physiological response are continual without true threshold boundaries. Consequently, there are overlaps among categories of response that depend on the sensitivity of the individuals exposed to noise.

AIR SOIL & WATER
ENVIRONMENTAL CONSULTING & TESTING LABORATORIES

May 23, 2002

Robin Morecroft, P.E.
Director of Project Management
EnviroPower LLC
28th Floor
Lexington Financial Center
Lexington, KY 40508

Subject: Compatibility between land use by a Utility and a single family residence located approximately 2.5 miles from the Stack of the proposed utility.

Dear Mr. Morecroft:

Air Soil & Water Environmental Consulting and Testing Laboratories, Inc. ASW has prepared a worst-case model of ambient environmental noise levels emitted from the proposed power plant equipment. The following details the basic assumptions of the model and site conditions.

MODEL ASSUMPTIONS:

1. The worst-case environmental ambient noise levels emitted from the power plant equipment is modeled after the Noise Evaluation of the Burbank Magnolia Power Project. While not all of the equipment assessed in the Burbank evaluation will be present at The Kentucky Mountain Power Plant, similar products will be used. i.e. the combustion turbine and the heat recovery steam generator will not be used at Kentucky Mountain Power, a similar product to the heat recovery steam generator will be used.

2. That there are no natural sound barriers to deflect or absorb noise and that sound pressure levels are not contained by a structure.

3. That day and night levels of noise are constant.

431 South Broadway Suite 100 Lexington, Kentucky 40508 Phone 859/231-7825 Fax 859/231-0242

4. That Sound Pressure Level drops with each doubling of distance. [1]

5. That Adjusted Yearly Average Day Night Sound Levels in residential neighborhoods with extensive outdoor use is 65 dB. [2]

6. That Adjusted Yearly Average Day Night Sound Levels for commercial-wholesale, some retail, industrial manufacturing, and utilities is 80 dB.[2]

7. The proposed Power Plant and Coal Handling Facility physically occupies 195.05 acres. The entire property controlled by the owner is approximately 4,000 acres.

The following table estimates the Sound Pressure Level Drop over distance for each piece of equipment assessed in the Burbank Magnolia Power Project Evaluation. [3]

HP/IP BOILER FEEDWATER PUMPS

dBA	Feet	Results
90	3	90.0
90	50	65.56
90	100	59.54
90	150	56.02
90	200	53.52
90	250	51.58

CLOSED CYCLE COOLING WATER PUMPS

dBA	Feet	Results
90	3	90.0
90	50	65.56
90	100	59.54
90	150	56.02
90	200	53.52
90	250	51.58

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[1] Figure 3.3 Effects of Distance on Sound Pressure Levels, Van Nostrand Reinhold, Environmental Engineering Series 1969.

[2] American National Standard (ANSI S12.9-1998/ Part 5, Quantities and Procedures for Descriptive and Measurement of Environmental Sound Part 5 Sound Level Descroptors fro Determination of Compatible Land Use.

[3] Sound Pressure Level over distance is calculated using the equation L_{eq}(equipment)=E.L.+10log(UF) – 20log {D/50}-10Glog{D/50}

CONDENSATE PUMPS

dBA	Feet	Results
90	3	90.0
90	50	65.56
90	100	59.54
90	150	56.02
90	200	53.52
90	250	51.58

STEAM TURBINE AND GENERATOR

dBA	Feet	Results
65	400	65.0
65	450	63.97
65	500	63.06
65	550	62.23
65	600	61.47
65	650	60.78
65	700	60.13
65	750	59.54
65	800	58.98
65	850	58.45
65	900	57.95
65	950	57.48
65	1000	57.04
65	2000	51.02
65	4000	45.0
65	6000	41.5
65	8000	38.98
65	10000	37.04

Cooling Tower Cell

dBA	Feet	Results
65	400	65.0
65	450	63.97
65	500	63.06
65	550	62.23
65	600	61.47
65	650	60.78
65	700	60.13
65	750	59.54
65	800	58.98
65	850	58.45
65	900	57.95
65	950	57.48
65	1000	57.04
65	2000	51.02
65	4000	45.0
65	6000	41.5
65	8000	38.98
65	10000	37.04

Gas Compressor

dBA	Feet	Results
90	3	90.0
90	50	65.56
90	100	59.54
90	150	56.02
90	200	53.52
90	250	51.58

Step-up Transformers

dBA	Feet	Results
85	1	85.0
85	50	51.02
85	100	45.0

COMBUSTION GAS TURBINE AND GENERATOR

dBA	Feet	Results
65	400	65.0
65	450	63.97
65	500	63.06
65	550	62.23
65	600	61.47
65	650	60.78
65	700	60.13
65	750	59.54
65	800	58.98
65	850	58.45
65	900	57.95
65	950	57.48
65	1000	57.04
65	2000	51.02
65	4000	45.0
65	6000	41.5
65	8000	38.98
65	10000	37.04

HEAT RECOVERY STEAM GENERATOR (HRSG)

dBA	Feet	Results
65	400	65.0
65	450	63.97
65	500	63.06
65	550	62.23
65	600	61.47
65	650	60.78
65	700	60.13
65	750	59.54
65	800	58.98
65	850	58.45
65	900	57.95
65	950	57.48
65	1000	57.04
65	2000	51.02
65	4000	45.0
65	6000	41.5
65	8000	38.98
65	10000	37.04

SOUND PRESSURE LEVELS REPRESENT MAXIMUM A-WEIGHTED SOUND PRESSURE LEVELS PER UNIT.

CONCLUSION:

Based upon the above estimated Sound Pressure Level Drop the residential property located approximately 2.5 miles from the proposed power plant will not be adversely impacted by noise.

Prepared By:

JRKeller

John L. Keller CES, CEI, IH

8.3.0 Property Description

The plant site is located at 37°25'21"N and 83°06'52" W. Included with this assessment is a detailed aerial photograph showing property features.

8.3.1. Surrounding Land Use

The Kentucky Mountain Power project site is on property that has been and continues to be operated by the Starfire Mining Company as a surface coal mine. This mine has the distinction of being the largest surface mine in the eastern USA.

The adjacent properties to the Kentucky Mountain Power, LLC leasehold boundary are all permitted for surface mining, except for a single parcel located to the northeast of the property. This parcel is owned by Appalachian Realty, a coal minerals company. It is expected that this parcel will be permitted for mining activities in the future.

8.3.2. The Legal Boundaries of the Proposed Site

The plant location lies within an area of 4000 acres that Kentucky Mountain Power, LLC holds under lease from Appalachian Realty Company. A copy of the lease is included in the Appendixes. Within the leased area Kentucky Mountain Power, LLC has options to purchase from Appalachian Realty approximately 1993 acres. This acreage includes 195 acres surrounding the power plant proper which is the "site" as defined in SB 257, 544 acres at the ash disposal area and 106 acres at the water storage reservoir area (with an additional 62 acres under option from Vera Salyer for the water storage reservoir) and approximately 1150 acres for the industrial park, golf course and road. The optioned properties indicated on the attached aerial photograph. Copies of the property descriptions are included in the appendixes.

8.3.3. Proposed Access Control to the Site

Access to the property will be via the new heavy haul road and bridge from Highway 80. The road from Highway 80 to the power plant proper boundary will be a public county road. The location of this road is detailed on the site drawing.

At the entrance to the power plant there will be a security building manned 12 hours per day with security cameras and cardkey access during the off hours and weekends. Only authorized personnel will be allowed to enter the plant property.

The power plant facility will be completely surrounded by a cyclone wire fence, a minimum of six feet high topped with barbed wire. Around the outer boundary of the plant property will be a three-strand barbed wire fence.

The ash disposal area and the water supply reservoir will be surrounded by cyclone wire fences, a minimum of six feet high topped with barbed wire. Access to these areas will be through locked gates. There will be no public roads to access these areas.

8.3.4. Location of Facility Buildings, Transmission Lines and other Structures

There will be a number of major buildings erected as part of the project. These buildings are listed below

- Boiler Building
- Turbine Building
- Baghouse Buildings
- Coal Crushing Building
- Limestone Crushing Building
- Administration Building
- Warehouse Building
- Maintenance Shop Building
- Security Building
- Coal Truck Dump Hoppers
- Limestone Truck Dump Hoppers
- Water Treatment Building

Each of these buildings is located on the site plan drawing.

8.3.5. Location of and use of access ways, internal roads and railroads

There will be a number of roads within the plant. These roads will provide access for the fuel deliveries, limestone deliveries and general plant access. The roads are indicated on the detailed plant drawing.

There will be no rail access to the plant site.

8.3.6. Existing and Proposed Utilities to Service the Facility

Electric distribution lines and a gas collection system presently exist on the plant site. These existing utilities will be relocated as part of the project construction.

Proposed utilities to support the project include electric switchyard and transmission lines, high pressure gas line and water supply system. These utilities are discussed in more detail in other sections of this document.

8.3.7. Compliance with Applicable Setback Requirements

Under the new portion of KRS 278, Section 3, the setback requirements are as follows;

(2) "… the exhaust stack of the proposed facility is at least one thousand (1000) feet from the property boundary of any adjoining property owner and two thousand (2000) feet from any residential neighborhood, school, hospital or nursing home facility."

(5) "If the merchant electric generating station is proposed to be located on a site of a former coal processing plant in the Commonwealth where the electric generating facility will utilize on-site waste coal as a fuel source, then the one thousand (1000) foot property boundary requirement of subsection (2) of this section shall not be applicable."

The plant location is within 600 feet of the purchased property boundary and over 1000 feet from the leased property boundary. There are no residential neighborhoods, schools, hospitals, nursing facilities or public or private parks within a 2 mile radius of this location. The nearest neighbor is approximately 13,000 feet from the power plant site.

The power plant is located completely within the unincorporated area of Knott County. A portions of the water storage reservoir will be located in Perry county. There is no applicable Planning and Zoning Commission with jurisdiction over these locations.

PLANT SITE PROPERTY 195.05 ACRES

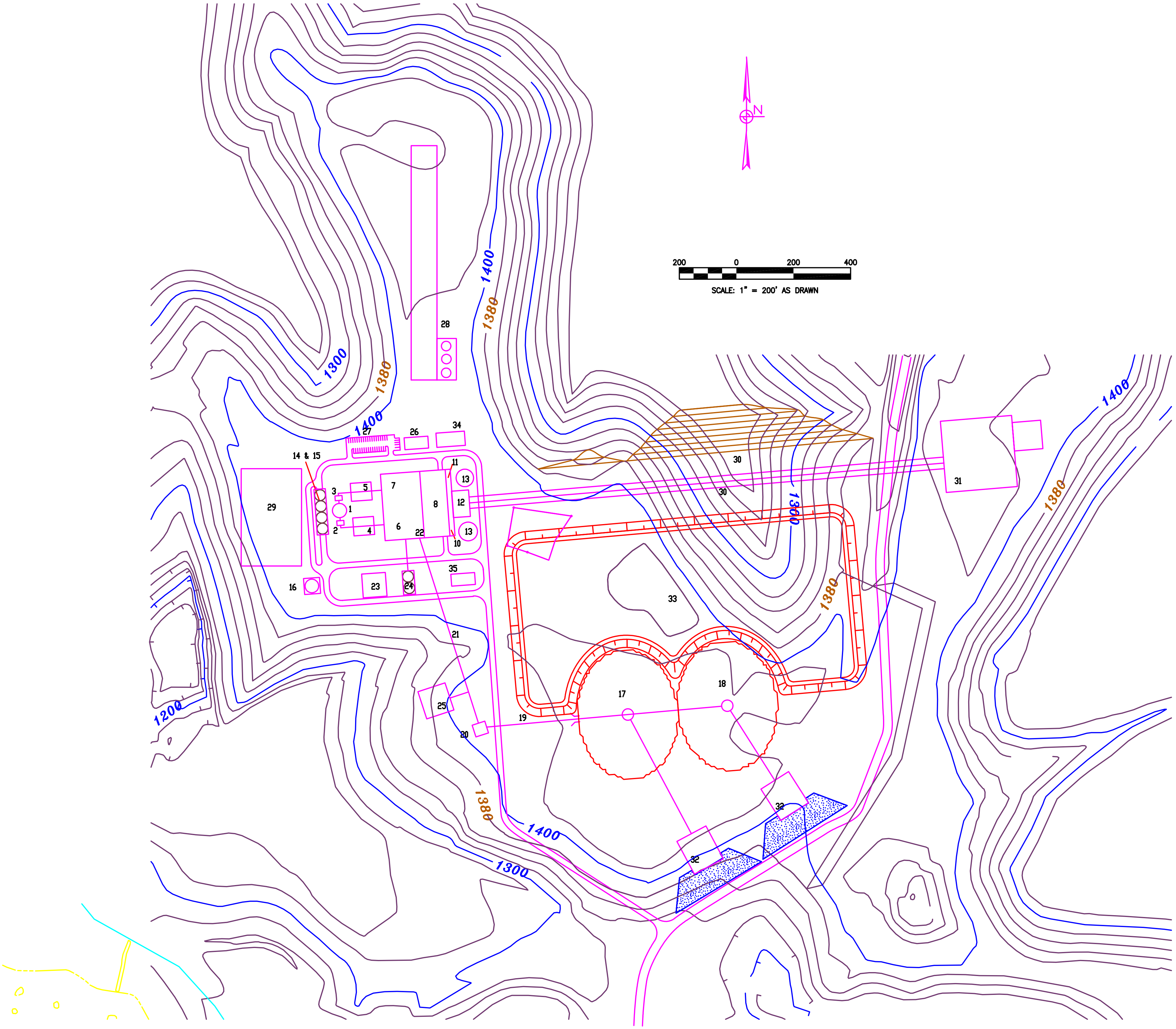
Lying and being in Knott County, Kentucky, on the waters of Long Fork and Dan's Fork of Buckhorn Creek, a tributary of Troublesome Creek and being more particularly described as follows:

Unless stated otherwise, any monument referred to herein as a "capped iron pin" is a set ½ inch diameter rebar, eighteen inches in length, with a red plastic cap stamped PLS #3079. All bearing stated herein are referred to the NAD83 State Plane Coordinate System.

The subject property of the description below is a part of and is completely surrounded by other property owned by Grantor (Deed Book 119, Page 719 and Deed Book 108, Page 108), such deeds being recorded in the records of the Knott County Court Clerk in Hindman, Kentucky. Appalachian Realty Company, by corporate name change effective as of June 30, 1998, is the successor to Cyprus Southern Realty Corporation, and Cyprus Southern Realty Corporation, by corporate name change effective as of June 11, 1987, is the successor to Southern Realty Resources, Inc., where title originates with (i) a deed from Franklin Real Estate Company dated April 14, 1977, recorded in Deed Book 119, at Page 719, and (ii) a deed from Goodloe Brothers, a partnership, dated July 29, 1977, recorded in Deed Book 108, Page 108, which deeds appear of record in the aforesaid Clerk's Office.

Beginning an at iron pin with plastic cap stamped PLS #3079 set this survey in the watershed of the Right Fork of Dan's Fork, said pin is located at Nad83 State Plane Coordinate N:2048527.45 E:2405431.80 and is referenced S 43˚36'17" E, 3131.43 feet to a PK Nail in a large rock at Nad83 State Plane Coordinate N:2048527.45 E:2405431.80, thence running down the hollow N 16˚40'09" W, 622.92 feet to a capped iron pin, thence crossing the point into the watershed of the Left Fork of Dan's Fork N 72˚41'15"E, 788.61 feet to a capped iron pin, thence running up the Left Fork of Dan's Fork S 15˚20'18"E, 1015.63 feet, thence leaving the watershed of Dan's Fork and running up the hill and across the point into the watershed of Hurricane Branch S 84˚12'55" E, 2093.22 feet to a capped iron pin, thence running around the hill S 24˚19'01"W, 1232.22 feet to a capped iron pin near the head of a small unnamed hollow in the watershed of Hurricane Branch, thence crossing the point and running S 32˚43'46" E, 573.25 feet to a capped iron pin in a small hollow in the watershed of Hurricane Branch, thence leaving the watershed of Hurricane Branch and running across the ridge S 39˚44'27" W, 2093.79 feet to a capped

iron pin set on a fill area in the watershed of Long Fork, thence N 69˚03'47" W, 919.98 feet to a capped iron pin set on a fill area in the watershed of Long Fork, thence N 22˚09'06" W, 2780.34 feet to a capped iron pin, thence N 37˚42'37" E, 847.27 feet to the Point of Beginning, containing 195.05 acres more or less.



LEGEND :

1. CHIMNEY
2. ID FAN UNIT 1
3. ID FAN UNIT 2
4. BAGHOUSE UNIT 1
5. BAGHOUSE UNIT 2
6. BOILER BUILDING UNIT 1
7. BOILER BUILDING UNIT 2
8. TURBINE BUILDING UNIT 1
9. Not Used
10. ELECTRICAL EQUIPMENT ROOM UNTI 1
11. ELECTRICAL EQUIPMENT ROOM UNIT 2
12. TRANSFORMER YARD
13. DEMIN TANK
14. FLY ASH SILO
15. BOTTOM ASH SILO
16 FUEL OIL STORAGE TANKS
17. HIGH ASH PILE
18. LOW ASH PILE
19. COAL RECLAIM CONVEYOR
20. COAL CRUSHER BUILDING
21. COAL FEED CONVEYOR
22 COAL TRIPPER CONVEYOR
23. LIMESTONE PILE / COVERED STORAGE
24. LIMESTONE PREP BUILDING
25. FINES BUNKER
26. ADMIN BUILDING
27. ADMIN BUILDING PARKING
28. COOLING TOWER UNIT 1
29. WATER TREATMENT PLANT
30. TRANSMISSION LINES
31. SWITCHYARD
32. COAL DELIVERY
33. COAL STORAGE
34. WATER TREATMENT
35. WAREHOUSE

REV.	DATE	REVISION DESCRIPTION	DRWN CHK.	LAYO MECH	CIVIL ELEC	ENGM PROJ	REV.	DATE	REVISION DESCRIPTION	DRWN CHK.	LAYO MECH	CIVIL ELEC	ENGM PROJ	DWG. NO.	REFERENCE DRAWINGS

DRAWN BY ??	INITIALS/DATE
CHECKED BY	INITIALS/DATE
LAYOUT APPROVAL	INITIALS/DATE
MECHANICAL APPROVAL ??	INITIALS/DATE ??
CIVIL APPROVAL ??	INITIALS/DATE ??
ELECTRICAL APPROVAL ??	INITIALS/DATE
ENGINEERING MANAGER	INITIALS/DATE
PROJECT DIRECTOR	INITIALS/DATE

ENVIROPOWER, LLC
KENTUCKY MOUNTAIN POWER
2 x 250 MW PROJECT

SITE PLAN

SCALE 1'=200' | SUBJECT CODE | SEQ No 0 | REV. A

DIST. CODE

$$$DGNSPEC$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

*DATE*TIME* MANUAL CHANGES MADE - YES☐ NO☐ DWG. FILE UPDATED - YES☐ NO☐ MODEL UPDATED - YES☐ NO☐

Section 8.5

Adjacent Property Valuation

Kentucky Mountain Power, LLC (KMP) controls the approximate 3,800 acres of land surrounding its proposed 195 acre plant site in Knott County, Kentucky through a 99 year lease with Appalachian Realty Company (ARC). The lease will expire on December 1, 2098 and KMP has the option to renew the lease for an additional 99 year term. The only adjacent landowner to the plant site, therefore, is ARC. Due to the long term nature of the lease, however, ARC will be unable to realize any increase in value, if any, the land may experience due to the siting, construction and operation of the proposed power plant. KMP is unaware of any appraisers qualified to espouse as to the potential value of the land in 2098 when the current term expires, or 2197, if the option is exercised.