LAW OFFICES OF
LISA E. UNDERWOOD PLC
314 HOLIDAY ROAD
LEXINGTON, KENTUCKY 40502
(859) 269-5487 phone
(859) 269-1988 fax
lisa@lunderwoodlaw.com

July 28, 2004

Beth O'Donnell, Executive Director
Kentucky State Board on Electric Generation and Transmission Siting
211 Sower Boulevard
P.O. Box 615
Frankfort, KY 40602

RE: Estill County Energy Partners, LLC
Case No. 2002-00172
Response to Staff's Second Data Request

Dear Ms. O'Donnell:

Estill County Energy Partners, LLC ("ECEP") is submitting its response to the Staff's Second Data Request dated July 21, 2004.

ECEP is submitting with this letter an original and six (6) paper copies of ECEP's response. ECEP will also file the response electronically on this date and provide a copy to all parties of record.

Sincerely,

Lisa E. Underwood

Lisa E. Underwood
Attorney for Estill County Energy Partners, LLC

cc: Gerard B. Mack
Joseph Tirone, Esq.
Parties of Record

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing was sent by United States First Class Mail, sufficient postage prepaid, to the following this the 28th day of July, 2004.

Darrell D. Brock, Jr.
Commissioner/Assistant to Governor
Office of Local Government
1024 Capital Center Drive
Suite 340
Frankfort, KY 40601

Danny P. Woods
Brighton A&E
201 Brighton Park Boulevard
Frankfort, KY 40601

John St. Claire
Citizens Guaranty Bank
Riverdrive
Irvine, KY 40336

Judge Wallace Taylor
Estill County Judge Executive
130 Main Street
Room 101
Irvine, KY 40336

Gene Strong
Secretary
Economic Development Cabinet
2300 Capital Plaza Tower
500 Mero Street
Frankfort, KY 40601

Wayne F. Collier
Kinkead & Stilz, PLLC
National City Plaza 301 East Main Street
Suite 800
Lexington, KY 40507-1520

Honorable LaJuana S. Wilcher
Secretary
Environmental and Public Protection
Ky Division of Energy
Fifth Floor
Capital Plaza Tower
Frankfort, KY 40601

Will Herrick
4859 Flat Mary Road
Campton, KY 41301-9509

Thomas J. FitzGerald
Kentucky Resources Council, Inc.
P.O. Box 1070
Frankfort, KY 40602

Lisa E. Underwood

Lisa E. Underwood

1. *What are the noise metrics for the noise levels presented on the construction and operational equipment listed in Exhibit H, pages 2 and 4?*
   a. *Day-Night Average Sound Level ("DNL").*
   b. *Maximum A-weighted Sound Level ("Lmax").*
   c. *Equivalent Hourly Sound Level ("Leq(h)").*
   d. *Sound Exposure Level ("SEL").*

The sound levels reported in Table 1 and Table 3 of Exhibit H are Equivalent Hourly Sound Level (L_{eq}(h)).

Person who will be responsible for responding to questions relating to this information: Dell Jaggers

2. Document the reference used for Tables 1 and 2 in Exhibit H.

Table 1 and Table 2 are from "Noise from Construction Equipment and Operations, Building Equipment and Home Appliances", dated December 31, 1971, prepared by Bolt, Beranek and Newman.

Person who will be responsible for responding to questions relating to this information: Dell Jaggers

3. The noise study refers to Burbank Magnolia Plant.

a. Where is this plant located?

b. Is the topography of the Burbank Magnolia Plant similar to the proposed site?

The referenced plant is located in Burbank, CA.

The Burbank Magnolia plant is located in terrain flatter than that surrounding the Site. No attenuation is assumed for noise levels at the ECEP plant.

Person who will be responsible for responding to questions relating to this information: Dell Jaggers

4. Provide additional information as to the noise source of Attachment I. Is the noise source in this diagram the Burbank Magnolia Plant, a similar existing power plant, or the proposed power plant?

Attachment (I) of Exhibit H was provided by Alstom Power, Inc. ("Alstom"). Alstom is a manufacturer of circulating fluidized bed ("CFB") boilers and related power plant equipment. The noise source in the diagram represents a standard Alstom CFB power plant in the 100 to 150 megawatt size range on a flat site without trees, variable terrain or other attenuating circumstances. This noise source is conservatively representative of the noise levels expected from the Facility on the Site.

Person who will be responsible for responding to questions relating to this information: Dell Jaggers

5. Provide the amount of noise mitigation the silencers will provide on steam blows at the property boundary or the nearest sensitive receiver.

ECEP expects that commercially available silencers will attenuate steam blow sound levels by up to 35 to 40 dBA at the source. This source attenuation is equivalent to a noise level of 53 dBA at a 400-foot property boundary and 39 dBA at a 2100-foot nearest residence.

Person who will be responsible for responding to questions relating to this information: Dell Jaggers

6. Provide the cumulative noise levels of multiple noise sources such as air compressors, cranes, pneumatic tools, etc.

Because sounds waves from various sources are emitted at different frequencies, magnification of noise is not increased significantly when multiple noise sources are operated concurrently. For example, two 65 dBA sources have a combined sound level of 68 dBA.

Normal practice is to schedule noisy operations so that they occur during the same time period. Cumulative noise levels will therefore not be significantly greater than the level produced if the operations were performed individually and sequentially over a longer time period. Attachment (I) of Exhibit H maps cumulative noise sources.

Person who will be responsible for responding to questions relating to this information: Dell Jaggers

7. Provide average and peak noise levels for the proposed facility during construction and during operation.

Construction Average
Various on-Site activities will occur throughout the three-year Facility construction period. The average noise levels expected during this period when construction activities are occurring are approximately 50 dBA at the 400-foot property boundary and 36 dBA at the 2100-foot nearest residence. This average does not account for periods when Facility construction activities are not occurring on-Site.

Construction Peak
Peak noise during construction is expected to be caused by construction cranes. The peak noise for cranes is expected to be approximately 70 dBA at the 400-foot property boundary and 53 dBA at the 2100-foot nearest residence.

Operating Average
Table 3 and Appendix A of Exhibit H describes expected sound levels caused by certain equipment which will be operated with the Facility. The average noise levels expected during Facility operation are approximately 52 dBA at the 400-foot property boundary and 38 dBA at the 2100-foot nearest residence.

Operating Peak
Peak noise during operation will be caused by steam blows due to unforeseeable boiler upset conditions or unplanned shutdowns. Peak noise levels from these steam blows will be attenuated with silencers. The silenced peak noises are expected to be approximately 53 dBA at the 400-foot property boundary and 39 dBA at the 2100-foot nearest residence.

Person who will be responsible for responding to questions relating to this information: Dell Jaggers

8. A statement in the noise study refers to "CFB power Plant." What does CFB stand for?

CFB stands for "Circulating Fluidized Bed" boiler, the type of steam generator to be used in the Facility.

Person who will be responsible for responding to questions relating to this information: Gerry Mack

9. Provide the following additional information regarding noise sources at the proposed power plant:

a. Average cumulative peak noise levels [Leq(h) or DNL] during construction of the power plant at the following locations:

(1) Property boundary (400 feet).

(2) Nearest residence (2,100 feet).

b. Average cumulative peak noise levels [Leq(h or DNL] during operation of the power plant at the following locations:

(1) Property boundary (400 feet).

(2) Nearest residence (2,100 feet).

c. State whether the information provided in Tables 1 and 3 are Leq(h) or DNL noise metrics.

a. Construction Average

Various activities will occur during the three-year construction period. The average noise levels expected during construction activities during this period are approximately 50 dBA (Leq(h)) at the 400-foot property boundary and 36 dBA (Leq(h)) at the 2100-foot nearest residence. The average is estimated based upon noise levels for the various pieces of equipment assuming they are operated during construction periods and does not account for periods of non-construction. All noise levels are provided in Leq(h). The level of 50 dBA (Leq(h)) at the 400-foot property boundary corresponds to maintaining a constant noise level of 70 dBA (Leq(h)) at 50 feet during the entire construction period which we believe is conservative when considering projected noise levels for individual pieces of equipment.

Construction Peak

Peak noise during construction will be caused by the crane with 88 dBA (Leq(h)) at 50 feet . The peak noise for the crane is expected to be approximately 70 dBA (Leq(H)) at the 400-foot property boundary and 53 dBA (Leq(h)) at the 2100-foot nearest residence. With silencers, estimated noise levels for the steam blows fall below that predicted for the crane. However, according to the referenced material, the typical noise level of 88 dBA (Leq(h)) (and noise levels for other pieces of equipment) assumes full power operation of the construction equipment continuously for the hour period. Therefore, it truly represents the peak for that particular piece of equipment and not an average over that hour period.

b. Operating Average
Table 3 and Appendix I of Exhibit H describes expected sound levels caused by certain equipment which will be operated with the Facility. According to Attachment I, the average noise levels expected during Facility operation are approximately 52 dBA (Leq(h)) at the 400-foot property boundary and 38 dBA (Leq(h)) at the 2100-foot nearest residence. Please refer to Attachment I of the Noise Report for Noise levels emitted by a typical Alstom plant of similar size to the one proposed by ECEP. It should also be noted that this represents a conservative approach because the Alstom model assumes that all equipment at the plant is operating simultaneously.

Operating Peak
Peak noise during operation will be caused by steam blows due to unforeseeable boiler upset conditions or unplanned shutdowns. Peak noise levels from these steam blows will be attenuated with silencers reducing noise levels from 120 dBA (Lmax) to approximately 85 dBA (Lmax) at 10 feet. The silenced peak noises are expected to be approximately 53 dBA (Lmax) at the 400-foot property boundary and 38.5 dBA (Lmax) at the 2100-foot nearest residence. This noise level represents the peak and not an average or Leq(h).

c. Please refer to the sound units specified in responses above.

Person who will be responsible for responding to questions relating to this information: Dell Jaggers

10. To clarify noise levels provided, update Tables 1 and 3 to provide the following information:

a. Leq(h) or DNL for each individual piece of construction or operating equipment.
b. Lmax for each individual piece of construction or operating equipment.
c. Cumulative noise levels for construction equipment [Leq(h) or DNL].
d. State source used for each noise level estimated.

a. Noise levels for construction equipment in Table I of the report are estimated in Leq(h) assuming full peak power operation continuously for a one hour period. Table 3 of the report is provided as the peak level for operating equipment and not an average. Attachment I of the report was provided by a power plant equipment manufacturer and estimates instantaneous noise levels for a similar sized power plant during normal operation of all equipment at varying distances.
b. Lmax for each piece of equipment is represented by Table I (Leq(h) operated at full power continuously for a period of one hour) and Table 3 in the report.
c. The cumulative noise level for a single piece of equipment is represented by Table I. Cumulative noise levels for construction equipment operating simultaneously is difficult to predict absent actual measurement. Factors making prediction difficult include: time of operation, noise frequency for each piece of equipment, actual construction setting, etc. An accepted approach for assessing the cumulative noise level for several pieces of equipment operating simultaneously is to increase the maximum noise level by 5% or 88 dBA x 1.05 = 92.4 dBA at 50 feet. This translates to 74.3 dBA at 400 feet and 59.9 dBA at 2100 feet (nearest residence). One should note that this level of noise is not an average over a long period of time and that, in many instances, it is best to operate several pieces of the noisiest equipment at the same time to reduce the duration of the noise with only slight increases in the level.
d. Table 1 is from U.S. Environmental Protection Agency, "Noise from Construction Equipment and Operations, Building Equipment and Home Appliances," NTID300.1, December 31, 1971. Table 3 was obtained from noise studies completed by EPA at the Burbank Magnolia Power Plant in California. Attachment I is a noise level isodiagram provided by a CFB equipment manufacturer, Alstom Power, Inc.

Person who will be responsible for responding to questions relating to this information: Dell Jaggers