TECHNICAL AREA: VISUAL RESOURCES

Data Request 62 Rev:

For the cooling tower, please summarize the conditions that affect vapor plume formation including cooling tower heat rejection, exhaust temperature, and exhaust mass flow rate. Please provide values to complete the table, and additional data as necessary for staff to be able to determine how the heat rejection load varies with ambient conditions and also determine at what ambient conditions cooling tower cells may be shut down.

Parameter	Cooling Tower Exhausts		
Number of Cells	3 cells		
Cell Height*	12.8 meters (42 feet)		
Cell Diameter*	6.71 meters (22 feet)		
Tower Housing Length*	27.7 meters (91 feet)		
Tower Housing Width*	11.3 meters (37 feet)		
Ambient Temperature*	16.8°F	63.3°F	114°F
Ambient Relative Humidity	95.2%	76%	14.4%
Number of Cells in Operation			
Heat Rejection (MW/hr)	45.2	58.2	63.9
Exhaust Temperature (°F)			
Exhaust Flow Rate (lb/hr)			

*Ambient conditions and heat rejection, neglecting water makeup and blowdown, are based on the three heat balance cases provided in Section 3 and Appendix A of the AFC. Cell diameter and height are from the air quality modeling CD. Tower length and width are from AFC Table 3.4-1.

Additional combinations of temperature and relative humidity or curves showing heat rejection vs. ambient condition, if provided by the applicant, will be used to more accurately represent the cooling tower exhaust conditions. Please include appropriate design safety margins for the heat rejection, exhaust flow rate and exhaust temperature in consideration that the air flow per heat rejection ratio is often used as a condition of certification design limit.

Response:

Parameter	Cooling Tower Exhausts		
Number of Cells	3 cells		
Cell Height*	12.8 meters (42 feet)		
Cell Diameter*	6.71 meters (22 feet)		
Tower Housing Length*	27.7 meters (91 feet)		
Tower Housing Width*	11.3 meters (37 feet)		
Ambient Temperature*	16.8°F	63.3°F	114°F
Ambient Relative Humidity	84.0%	62.0%	14.6%
Number of Cells in Operation	1	2	2
Heat Rejection (MW/hr)	46	58.6	63.3
Exhaust Temperature (°F)	82	91	103
Exhaust Flow Rate (lb/hr)	4,000,000	6,600,000	6,400,000

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ORIGINAL MAILED FROM SACRAMENTO ON 3-21

The cooling tower performance data is provided in the table above. Two (2) cells are expected to be in operation at ambient temperatures above 30ºF; with one (1) cell operating at temperatures below 30ºF. The heat rejection can be defined as a function of ambient temperature in two regions: below 60ºF and 60ºF and higher. This is because evaporative coolers are used for CTG inlet air cooling at ambient temperatures 60ºF and higher. The expected heat rejection is given as follows:

Below 60ºF	-	HR = 70.3 + 0.48*Tamb (MMBtu/hr for each CT in service)
60ºF and above	-	HR = 82.8 + 0.24*Tamb (MMBtu/hr for each CT in service)

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION FOR THE *BULLARD ENERGY CENTER (BEC)*

Docket No. 06-AFC-8
PROOF OF SERVICE
(Revised 3/16/07)

INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 06-AFC-8
1516 Ninth Street, MS-4
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docket@energy.state.ca.us

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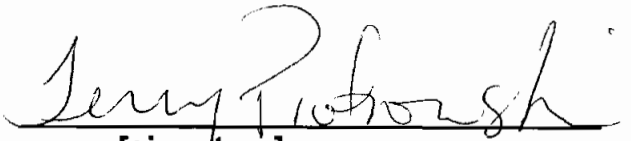
DECLARATION OF SERVICE

I,Terry Piotrowski, declare that on March 21, 2007 I deposited copies of the attached Bullard Energy Center AFC Technical Area Visual Resources: Revised Data Response # 62, in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.



[signature]