From: "Maulbetsch Consulting" <maulbets@sbcglobal.net>
To: "Eric Solorio" <ESolorio@energy.state.ca.us>
Date: 7/30/2009 10:22 AM
Subject: Re: Some information on low-noise fans
Attachments: 090730_ACC pictures_schematics.ppt

Eric.....

In response to your e-mail inquiry from yesterday:

1. The noise guarantee for the 3 ACC's that SPX specified are:

a. for the 40 °F ITD: 63 +/-2 dBa @ 400 ft.

b. for the 35 °F ITD: 64 +/-2 dBa @ 400 ft.

c. for the 45 °F ITD: 63 +/-2 dBa @ 400 ft.

2. Unit dimensions:

a. For the 40 °F ITD: 40 cells in an 8 x 5 arrangement:

i. Length: 337 ft.; width: 235 ft.; height: 131 ft.

b. For the 35 °F ITD: 42 cells in a 6 x 7 arrangement

i. Length: 359 ft.; width: 253 ft.; height: 135 ft.

c. For the 45 °F ITD: 35 cells in a 5 x 7 arrangement

i. Length: 337 ft.; width: 212 ft.; height: 127 ft.

I've attached a couple of photographs and schematics to help you and your colleague get a better idea of what these things look like. The cells in which the fans and the heat transfer bundles are contained are mounted on the top of columns and surrounded by a windwall so from the outside it looks like a big box on a bunch of steel columns. You can't really see the heat exchangers or the fans from the outside.

The bottom of the box is typically 60 to 70 feet above the ground. The A-frame exchanger bundles are about 35 to 40 feet high and the steam duct on the top of that is 12 or more feet in diameter. You can sometimes see the top of the steam duct sticking out above the top of the windwall. At one end there are large steam pipes (called risers) which deliver the steam to

the distribution duct on the top of the unit.

Let me know if you need any more description.

John

----- Original Message -----
From: "Eric Solorio" <ESolorio@energy.state.ca.us>
To: "Maulbetsch Consulting" <maulbets@sbcglobal.net>
Sent: Wednesday, July 29, 2009 11:29 AM
Subject: Re: Some information on low-noise fans

thanks John. Can you also identify the dB noise levels of the dry cooling system? and provide some dimensions; a visual description. perhaps Jared Foster would have this or you have another source. I need to provide the noise info to the staff person evaluating the Noise level and the visual description to the staff evaluating impacts to visual resources. As you know I have already built in some extra hours on your contract in case you go over your original estimate. thanks.

Eric

>>> "Maulbetsch Consulting" <maulbets@sbcglobal.net> 7/29/2009 10:46 AM >>>
Eric....

Here are some tables that address your question. The first two relate just to the fans themselves. The graph is from a slide presentation by Dave Sanderlin who, at the time, was VP-Technology for GEA and gives a rough idea of what various levels of noise reduction do to the cost of the whole ACC. It's pretty old, and I don't really know what the denominator is; that is, whether the base costs include erection, site prep etc.

I have sent a note to Paul Nelisson at Howden asking him if the numbers in the tables for noise reduction and cost are still pretty much ok. I'll let you know what he tells me.

Cheers.....

John

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Dry Cooling Fundamentals

Cooling Technology Institute Winter Meeting – February 7, 2007

SPX Cooling Technologies

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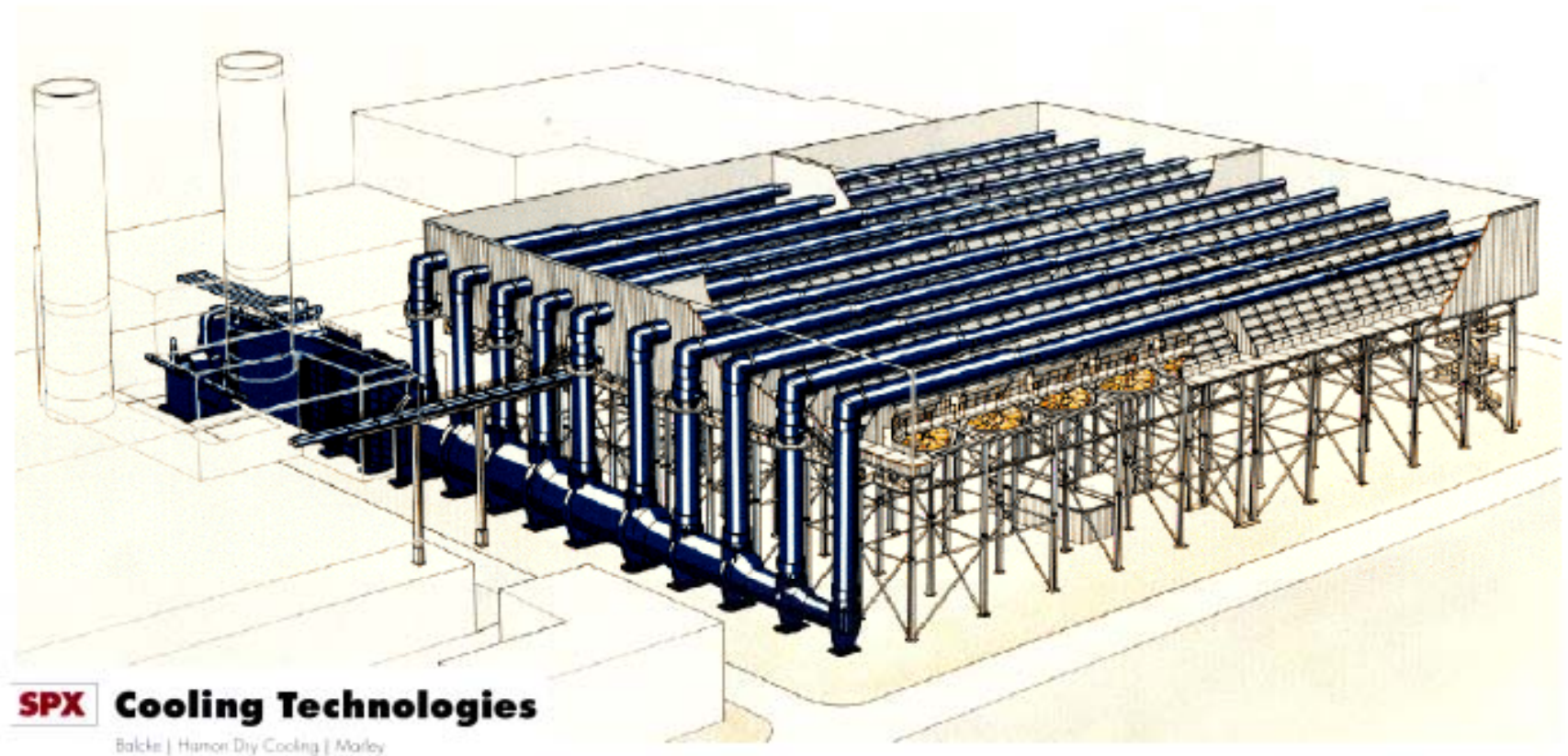

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