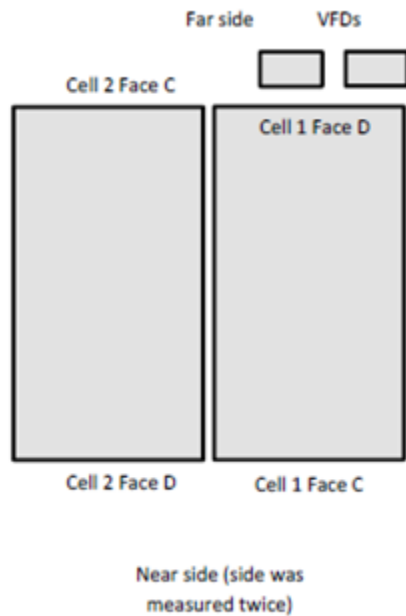


David Sellers

From: Stroupe, Ryan <R2S2@pge.com>
Sent: Wednesday, November 15, 2017 1:29 PM
To: David Sellers
Subject: RE: Cooling Tower Data



David,

The first readings taken on the near side of the cooling tower. CT fans were held at the constant speeds noted. See page labelled "near side"

The second readings were taken on the far side and are on the sheet labeled "far side". At this point Al left and we could no longer control the CT fan speeds. So we noted the fan speed for the specific tower in the right margin of the table. You can see the fan speed stayed relatively stable. You can also see this additional detail was not sustained as we proceeded to Cell 2 face C.

Then we repeated the readings on the near side with the last lab group. This page has the note: face C, Cell 1 "2". Since this data is redundant with the first set of readings, maybe these are omitted from your analysis.

The condenser water flow continued to be unbalanced with less flow on the sides of both towers (with more flow in the middle of the towers. Let me know if you have questions.

Ryan Stroupe
PG&E Pacific Energy Center
E: r2s2@pge.com

From: David Sellers [mailto:dsellers@facilitydynamics.com]
Sent: Wednesday, November 15, 2017 12:16 PM
To: Stroupe, Ryan
Subject: FW: Cooling Tower Data

*******CAUTION:** This email was sent from an EXTERNAL source. Think before clicking links or opening attachments.*****

Hi Ryan,

I just was touching bases about this; if it's easier to call and clarify that is fine; I should be around all day. I am working on some follow-up analysis and just wanted to be sure I was interpreting your notes correctly before I got too far down the road. Once I get done, I will put the follow-up on the class website page. Meanwhile, I will get the Tuesday class follow-up information up there and let you know once it is up in case you want to send out a follow-up e-mail to the class.

Also, thanks for forwarding the comment about the class; its nice to hear and makes me think we are taking a good approach to this.

Take care,

David

Senior Engineer
Facility Dynamics Engineering
Northwest Satellite Office
8560 North Buchanan Avenue
Portland, Oregon 97203
Office - 503-286-1494
Cell - 503-320-2630
DSellers@FacilityDynamics.com
<http://www.facilitydynamics.com/>

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From: David Sellers
Sent: Friday, November 10, 2017 8:22 AM
To: Ryan Stroupe (R2S2@pge.com) <R2S2@pge.com>
Subject: Cooling Tower Data

Hi Ryan,

Thanks for the data from your lab. Can you orient me a bit so I know better how to interpret it.

- I was not sure what near side was; i.e. was it the side closest to the ladder with the VFDs in front of it?
- I assume the data arrays are facing the cooling towers; are they also literally left and right when you are facing the cooling tower cells?
- Is page 2 the opposite face of the cells from face one; I think that is right but just wanted to be sure.
- Is page 3 the same face as page 1 but later in the afternoon (third lab group). I think that is right but wanted to be sure.
- Did you look at the distribution over the basins during the test to get a sense of how it correlated with the velocity patterns you saw. A quick look implies that the distribution was similar to what we were seeing in the morning and not as severely messed up as we saw the day before (now flow over half of the tower on the face farthest from the ladder), but I just wanted to be sure.

Thanks again for the data. I will develop it and share it in class and on the blog.

David

Senior Engineer
Facility Dynamics Engineering
Northwest Satellite Office
8560 North Buchanan Avenue
Portland, Oregon 97203
Office - 503-286-1494
Cell - 503-320-2630

DSellers@FacilityDynamics.com

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