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Sent: Friday, August 29, 2008 12:49 PM
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Brian_Dunn@fpl.com; Cash, Jimmy P.; Mast, Peter ; Zigler, Gilbert
Subject: Matrix of Head Losses for VUEZ/Prototype - Alion

John/Joe,

Can you forward this information to Donnie as I don't have his email just yet? Below is the table of head losses requested by staff during their visit. We have only provided the head losses below for those folks that intend on using the results of VUEZ directly in support of a chemical effects bump-up factor. If you are further interested in those pressure drops for folks that are not using the data, I would suggest that you contact that licensee directly.

The prototype pressure drops below were corrected from the test temperature to 190F based on viscosity. The values below are obtained from our available calculations, and the design basis number would be obtained from the plant design basis documents and not from Alion directly. In that, these numbers are approximate at this time, sufficient for your comparative purposes.

Recall when comparing prototype head losses to flat plate head losses there are geometric considerations that come into play. At this time, you have not requested we explain the differences, only present the data. You will note that the values are quite low for both the prototype and the VUEZ tests as this is indicative of the extremely low approach velocities (large screens). Although there are differences in some of the numbers, we are talking about inches of head loss here. Debris beds that cause inches of head loss have low approach velocity and a high bed porosity.

Plant	Equivalent Bed Thickness (in)	Prototype Debris dP @ 190F (in.)	VUEZ Debris dP @ 190F (in.)	Approach Velocity (fps)	Comments
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SONGS	0.87	8.98	1.89	0.008	
SONGS	1.00	7.65	2.57	0.008	
SONGS	0.15	4.09	0.76	0.008	
Indian Point 2	1.0	1.4		0.004	T1
Indian Point 2	2.5	58.8		0.008	T2
Indian Point 2	1.0	1.6		0.005	T3
Indian Point 3	2.46	65.4		0.008	T1
Indian Point 3	0.94	9.8		0.008	T2
	0.63		2.13	0.007	Case 1.1
	0.92		2.61	0.005	Case 2
	0.74		1.20	0.008	Case 3
	0.34		0.40	0.008	Case 4
Turkey Pt 3	0.01	10.2	0.9	0.0015	Cal-Sil bed
St. Lucie 1	0.19	8.4	0.5	0.0023	Case 2.1
St. Lucie 1	0.73	5.65	1.12	0.0023	Case 3
Vogtle	5.28	20.9	5.28	0.013	

If you have any questions on this matrix please feel free to contact me directly.

Thanks,

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Mail Envelope Properties (421135F6DE717A43929F9CF8ADE1A2F9017C0447)

Subject: Matrix of Head Losses for VUEZ/Prototype - Alion
Sent Date: 9/29/2008 11:52:49 AM
Received Date: 8/29/2008 12:48:44 PM
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