

**Blowdown Heat Recovery Process - Temperature Evaluation**  
**One Minute Time Stamp Intervals from Externally Mounted Thermocouples**  
**Two x CB 300 HP Boilers Manual and Conductivity Controlled Blowdown**  
**August 1st to August 31th, 2009**

	Flash Steam Temp. (Deg. F)		Make-up Water Temp. (Deg. F)		Delta T Make-up Temp. (Deg. F)	
<b>Minimum</b>	134.8		79.2		7.2	
<b>Maximum</b>	268.9		157.8		85.8	
<b>Average</b>	170.1		94.3		22.3	
<b>Standard Deviation</b>	20.2		9.2		9.2	
<b>Data Range Count</b>	<b>130</b>	<b>175</b>	<b>75</b>	<b>100</b>	<b>0</b>	<b>20</b>
<b>Minutes</b>	28,227		32,751		19,414	
<b>% of Time</b>	73.9%		85.8%		50.9%	
	<b>176</b>	<b>200</b>	<b>101</b>	<b>125</b>	<b>21</b>	<b>40</b>
	5,483		4,074		13,541	
<b>Total Minutes</b>	14.4%		10.7%		35.5%	
<b>Reported</b>	<b>201</b>	<b>225</b>	<b>126</b>	<b>150</b>	<b>41</b>	<b>60</b>
	2,983		705		1,609	
<b>38,171</b>	7.8%		1.8%		4.2%	
	<b>226</b>	<b>250</b>	<b>151</b>	<b>175</b>	<b>61</b>	<b>81</b>
	487		3		359	
	1.3%		0.01%		0.9%	
	<b>251</b>	<b>275</b>				
	72					
	0.2%					

Notes: To calculate the percent of time any of the data sets are within a fixed temperature range, the number of data points counted between the low and high number are divided into the total number of minutes (data points collected) for each set.

On the following Graphics page, the Red lines represent the Flash Steam Outlet Temperature, the Blue line represents the Make-up Out Temperature and the Yellow line represents the average inlet water temperature during the period reported.

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