

**TABLE 4-7  
HYDROGEN CHLORIDE EMISSIONS RESULTS -  
FUEL DRYER OUTLET**

Run Number	1	2	3	Average
Date	11/5/2019	11/5/2019	11/5/2019	--
Time	0940-1055	1152-1305	1355-1505	--
<b>Process Data</b>				
Boiler 1 steam rate, lb/hr	23,407	22,989	22,985	23,127
Boiler 2 steam rate, lb/hr	24,110	23,076	23,900	23,695
Boiler 3 steam rate, lb/hr	29,341	30,092	29,004	29,479
Combined steam rate, lb/hr	76,858	76,157	75,889	76,301
Steam pressure, psi	250	250	248	249
Boiler 1 O <sub>2</sub> , %	6.2	6.3	6.5	6.3
Boiler 2 O <sub>2</sub> , %	6.4	6.8	6.5	6.6
Boiler 3 O <sub>2</sub> , %	14.1	13.6	13.9	13.9
Fuel consumed, bdt/hr	6.83	6.77	6.75	6.78
Dryer throughput, bdt/hr	3.07	3.05	3.04	3.05
Scrubber flowrate, gpm	236	236	236	236
Scrubber diff. press., in. w.c.	4.8	4.9	5.0	4.9
Multiclone 1 diff. press., in.w.c.	2.1	1.9	1.8	1.9
Multiclone 3 diff. press., in.w.c.	2.6	2.0	2.3	2.3
<b>Flue Gas Parameters</b>				
O <sub>2</sub> , % volume dry	17.4	17.3	17.8	17.5
CO <sub>2</sub> , % volume dry	3.8	3.9	3.4	3.7
flue gas temperature, °F	122	124	123	123
moisture content, % volume	11.9	12.0	12.2	12.0
volumetric flow rate, dscfm	28,165	29,339	28,417	28,640
<b>Hydrochloric Acid (HCl)</b>				
ppmvd	0.026	0.025	0.023	0.025
lb/hr	0.0042	0.0042	0.0037	0.0040
lb/MMBtu	1.42 × 10 <sup>-4</sup>	1.30 × 10 <sup>-4</sup>	1.36 × 10 <sup>-4</sup>	1.36 × 10 <sup>-4</sup>

**TABLE 4-8  
MERCURY EMISSIONS RESULTS -  
FUEL DRYER OUTLET**

Run Number	1	2	3	4	Average
Date	11/5/2019	11/5/2019	11/5/2019	11/5/2019	--
Time	0940-1055	1152-1305	1355-1505	1620-1720	--
<b>Process Data</b>					
Boiler 1 steam rate, lb/hr	23,407	22,989	22,985	24,973	23,588
Boiler 2 steam rate, lb/hr	24,110	23,076	23,900	26,016	24,275
Boiler 3 steam rate, lb/hr	29,341	30,092	29,004	27,530	28,992
Combined steam rate, lb/hr	76,858	76,157	75,889	78,519	76,856
Steam pressure, psi	250	250	248	246	248
Boiler 1 O <sub>2</sub> , %	6.2	6.3	6.5	6.7	6.4
Boiler 2 O <sub>2</sub> , %	6.4	6.8	6.5	6.3	6.5
Boiler 3 O <sub>2</sub> , %	14.1	13.6	13.9	14.8	14.1
Fuel consumed, bdt/hr	6.83	6.77	6.75	6.98	6.83
Dryer throughput, bdt/hr	3.07	3.05	3.04	3.14	3.07
Scrubber flowrate, gpm	236	236	236	235	236
Scrubber diff. press., in. w.c.	4.8	4.9	5.0	5.1	5.0
Multiclone 1 diff. press., in.w.c.	2.1	1.9	1.8	1.8	1.9
Multiclone 3 diff. press., in.w.c.	2.6	2.0	2.3	2.1	2.3
<b>Flue Gas Parameters</b>					
O <sub>2</sub> , % volume dry	17.4	17.3	17.3	17.8	17.5
CO <sub>2</sub> , % volume dry	3.8	3.9	3.9	3.4	3.7
flue gas temperature, °F	122	124	124	123	123
moisture content, % volume	11.9	12.0	12.0	12.2	12.5
volumetric flow rate, dscfm	28,165	29,339	29,339	28,417	29,011
<b>Mercury</b>					
µg/dscm	0.321	0.359	0.312	0.256	0.312
lb/hr	3.4 × 10 <sup>-5</sup>	4.0 × 10 <sup>-5</sup>	3.3 × 10 <sup>-5</sup>	2.9 × 10 <sup>-5</sup>	3.4 × 10 <sup>-5</sup>
lb/MMBtu	1.1 × 10 <sup>-6</sup>	1.2 × 10 <sup>-6</sup>	1.2 × 10 <sup>-6</sup>	9.0 × 10 <sup>-7</sup>	1.1 × 10 <sup>-6</sup>

**TABLE 4-3  
HYDROGEN CHLORIDE EMISSIONS RESULTS -  
ESP OUTLET**

Run Number	1	2	3	Average
Date	11/5/2019	11/5/2019	11/5/2019	--
Time	0940-1055	1152-1303	1355-1505	--
<b>Process Data</b>				
Boiler 1 steam rate, lb/hr	23,407	22,989	22,985	23,127
Boiler 2 steam rate, lb/hr	24,110	23,076	23,900	23,695
Boiler 3 steam rate, lb/hr	29,341	30,092	29,004	29,479
Combined steam rate, lb/hr	76,858	76,157	75,889	76,301
Steam pressure, psi	250	250	248	249
Boiler 1 O <sub>2</sub> , %	6.2	6.3	6.5	6.3
Boiler 2 O <sub>2</sub> , %	6.4	6.8	6.5	6.6
Boiler 3 O <sub>2</sub> , %	14.1	13.6	13.9	13.9
TR1 voltage, kV	43	44	44	44
TR1 current, mA	445	505	484	478
TR2 voltage, kV	47	47	48	47
TR2 current, mA	774	684	786	748
Fuel consumed, bdt/hr	6.83	6.77	6.75	6.78
Scrubber flowrate, gpm	236	236	236	236
Scrubber diff. press., in. w.c.	4.8	4.9	5.0	4.9
Multiclone 1 diff. press., in.w.c.	2.1	1.9	1.8	1.9
Multiclone 3 diff. press., in.w.c.	2.6	2.0	2.3	2.3
<b>Flue Gas Parameters</b>				
O <sub>2</sub> , % volume dry	14.1	14.2	14.4	14.2
CO <sub>2</sub> , % volume dry	6.6	6.7	6.5	6.6
flue gas temperature, °F	450	454	450	452
moisture content, % volume	9.7	10.4	11.5	10.5
volumetric flow rate, dscfm	59,853	59,412	60,529	59,931
<b>Hydrochloric Acid (HCl)</b>				
ppmvd	0.019	0.025	0.016	0.020
lb/hr	0.0066	0.0085	0.0057	0.0069
lb/MMBtu	5.34 × 10 <sup>-5</sup>	7.12 × 10 <sup>-5</sup>	4.70 × 10 <sup>-5</sup>	5.72 × 10 <sup>-5</sup>

**TABLE 4-4  
MERCURY EMISSIONS RESULTS -  
ESP OUTLET**

Run Number	1	3	4	Average
<b>Date</b>	11/5/2019	11/5/2019	11/5/2019	--
<b>Time</b>	0940-1055	1355-1505	1620-1728	--
<b>Process Data</b>				
Boiler 1 steam rate, lb/hr	23,407	22,985	24,973	23,788
Boiler 2 steam rate, lb/hr	24,110	23,900	26,016	24,675
Boiler 3 steam rate, lb/hr	29,341	29,004	27,530	28,625
Combined steam rate, lb/hr	76,858	75,889	78,519	77,089
Steam pressure, psi	250	248	246	248
Boiler 1 O <sub>2</sub> , %	6.2	6.5	6.7	6.5
Boiler 2 O <sub>2</sub> , %	6.4	6.5	6.3	6.4
Boiler 3 O <sub>2</sub> , %	14.1	13.9	14.8	14.3
TR1 voltage, kV	43	44	43	43
TR1 current, mA	445	484	412	447
TR2 voltage, kV	47	48	47	47
TR2 current, mA	774	786	801	787
Fuel consumed, bdt/hr	6.83	6.75	6.98	6.85
Scrubber flowrate, gpm	236	236	235	236
Scrubber diff. press., in. w.c.	4.8	5.0	5.1	5.0
Multiclone 1 diff. press., in.w.c.	2.1	1.8	1.8	1.9
Multiclone 3 diff. press., in.w.c.	2.6	2.3	2.1	2.3
<b>Flue Gas Parameters</b>				
O <sub>2</sub> , % volume dry	14.1	14.4	14.5	14.3
CO <sub>2</sub> , % volume dry	6.6	6.5	6.3	6.5
flue gas temperature, °F	450	450	438	446
moisture content, % volume	9.7	11.5	8.9	10.0
volumetric flow rate, dscfm	59,853	60,529	61,132	60,505
<b>Mercury</b>				
µg/dscm	0.476	0.516	0.421	0.471
lb/hr	1.1 × 10 <sup>-4</sup>	1.2 × 10 <sup>-4</sup>	9.6 × 10 <sup>-5</sup>	1.1 × 10 <sup>-4</sup>
lb/MMBtu	8.6 × 10 <sup>-7</sup>	9.7 × 10 <sup>-7</sup>	8.1 × 10 <sup>-7</sup>	8.8 × 10 <sup>-7</sup>

Note: Run 2 excluded from average because breakthrough criterion was not met