

SOURCE EMISSIONS TESTING – FALL ROUND 2017

Table 4.4 Source Testing Results - Power Boiler - Particulate Matter

Parameter	Test #1	Test #2	Test #3	Average	Stack Emission Limit (Table 5 of Approval)
Test Date	Dec. 5, 2017	Dec. 5, 2017	Dec. 5, 2017	-	-
Steam Load (klb/hr)	152.4	151.2	174.1	159.2	-
Test Start	8:15	12:30	16:35	-	-
Test Duration (min)	120	120	120	120	-
Volume of Gas Sampled (Rm ³)	1.39	1.15	1.28	1.27	-
Average Isokineticity (%)	96.0	97.1	98.0	97.0	-
Total Volume of Moisture Collected in Impingers (mL)	206	174	199	193	-
Particulate Matter from Filter and Probe Wash (mg)	91.3	56.8	98.3	82.1	-
Particulate Matter from Impingers (mg)	0.7	0.7	0.8	0.7	-
Exhaust Gas Parameters					
Exhaust Gas Temperature (°C)	56	56	56	56	-
Exhaust Gas Moisture Content (%)	16.8	17.0	17.4	17.1	-
Exhaust Gas Velocity (m/s)	17.4	14.4	16.0	15.9	-
Exhaust Gas Volumetric Flow Rate (Rm ³ /s)	39.2	32.2	35.5	35.6	-
Oxygen - O ₂ (%)	10.2	9.5	8.9	9.5	-
Carbon Dioxide - CO ₂ (%)	6.0	10.9	11.4	9.4	-
Total Particulate Matter - PM					
Concentration at 11% O ₂ (mg/Rm ³)	60.8	42.8	63.3	55.6	150
Emission Rate (kg/hr)	9.30	5.72	9.80	8.27	-
Emission Rate (g/s)	2.58	1.59	2.72	2.30	-
Particulate Matter Less Than 2.5 Microns – PM_{2.5}					
Concentration at 11% O ₂ (mg/Rm ³)	3.65	2.14	5.07	3.62	-
Emission Rate (kg/hr)	0.56	0.29	0.78	0.54	-
Emission Rate (g/s)	0.15	0.08	0.22	0.15	-
Legend:					
°C Degrees Celsius.					
m/s Metres per second.					
Rm ³ /s Dry cubic metres per second at reference conditions (25°C and 101.3 kPa).					
mg/Rm ³ Milligrams per dry cubic metre at reference conditions (25°C and 101.3 kPa).					
kg/hr Kilograms per hour.					
g/s Grams per second					
klb/hr Thousand pounds per hour.					