

SOURCE EMISSIONS TESTING – WINTER 2018

May 9, 2018

4.2 POWER BOILER

The results of the source emissions testing for total particulate matter and combustion gases from the Power Boiler exhaust stack are provided in Tables 4.2 and 4.3, respectively.

Table 4.2 Source Testing Results - Power Boiler - Particulate Matter

Parameter	Test #1	Test #2	Test #3	Average	Stack Emission Limit (Table 5 of Approval)
Test Date	March 21, 2018	March 22, 2018	March 22, 2018	-	-
Steam Load (klb/hr)	161.6	178.2	186.0	175.3	-
Test Start	15:05	08:28	11:43	-	-
Test Duration (min)	120	120	120	120	-
Volume of Gas Sampled (Rm ³)	2.22	2.26	2.26	2.25	-
Average Isokineticity (%)	97.9	101	100	99.7	-
Total Volume of Moisture Collected in Impingers (mL)	344	406	379	376	-
Particulate Matter from Filter and Probe Wash (mg)	242	292	257	264	-
Particulate Matter from Impingers (mg)	2.04	ND	1.71	1.25	-
Exhaust Gas Parameters					
Exhaust Gas Temperature (°C)	56.6	56.7	57.0	56.8	-
Exhaust Gas Moisture Content (%)	17.4	19.6	18.5	18.5	-
Exhaust Gas Velocity (m/s)	15.6	15.9	16.0	15.8	-
Exhaust Gas Volumetric Flow Rate (Rm ³ /s)	34.2	33.6	34.0	33.9	-
Oxygen - O ₂ (%)	9.39	8.96	7.57	8.64	-
Carbon Dioxide - CO ₂ (%)	11.0	11.4	13.0	11.8	-
Total Particulate Matter - PM					
Concentration at 11% O ₂ (mg/Rm ³)	93.5	107	84.4	95.0	150
Emission Rate (kg/hr)	13.4	15.6	13.9	14.3	-
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.					
klb/hr Thousand pounds per hour.					
ND not detected					

