

## SOURCE EMISSIONS TESTING – SPRING 2018

July 5, 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	June 13, 2018	June 13, 2018	June 13, 2018	-	-
Steam Load (klb/hr)	135.4	104.5	106.9	115.3	-
Test Start	10:05	14:37	17:59	-	-
Test Duration (min)	120	120	120	120	-
Volume of Gas Sampled (Rm <sup>3</sup> )	1.82	1.77	1.59	1.73	-
Average Isokineticity (%)	102	97.7	98.2	99.5	-
Total Volume of Moisture Collected in Impingers (mL)	336	262	223	274	-
Particulate Matter from Filter and Probe Wash (mg)	168	166	152	162	-
Particulate Matter from Impingers (mg)	6.15	4.56	4.09	4.93	-
<b>Exhaust Gas Parameters</b>					
Exhaust Gas Temperature (°C)	58.7	54.7	54.2	55.8	-
Exhaust Gas Moisture Content (%)	20.1	16.7	16.0	17.6	-
Exhaust Gas Velocity (m/s)	12.8	12.4	10.9	12.0	-
Exhaust Gas Volumetric Flow Rate (Rm <sup>3</sup> /s)	26.8	27.4	24.4	26.2	-
Oxygen - O <sub>2</sub> (%)	8.56	10.7	10.9	10.1	-
Carbon Dioxide - CO <sub>2</sub> (%)	11.8	9.81	9.58	10.4	-
<b>Total Particulate Matter - PM</b>					
Concentration at 11% O <sub>2</sub> (mg/Rm <sup>3</sup> )	74.1	90.6	95.1	86.6	150
Emission Rate (kg/hr)	8.91	9.19	8.41	8.84	-
Legend:					
°C      Degrees Celsius.					
m/s      Metres per second.					
Rm <sup>3</sup> /s      Dry cubic metres per second at reference conditions (25°C and 101.3 kPa).					
mg/Rm <sup>3</sup> 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.					