

FY2019 Exhaust gas analysis results of carbonizing equipment and power generation facilities

【Regulation value】

| Items             | Carbonizing equipment               | Power generation facilities     |
|-------------------|-------------------------------------|---------------------------------|
| Dust              | $\leq 0.08\text{g/m}^3\text{N}$     | $\leq 0.04\text{g/m}^3\text{N}$ |
| Sulfur oxides     | $\leq 8.76$ (K value)               | $\leq 8.76$ (K value)           |
| Nitrogen oxides   | 250 ppm                             | 200 ppm                         |
| Hydrogen chloride | $700\text{mg/m}^3\text{N}$          | -                               |
| Dioxins           | $1\text{ ng-TEQ/m}^3\text{N}$       | -                               |
| Dioxins(dust)     | $3\text{ ng-TEQ/ g -dry}$           | -                               |
| Mercury           | $50\text{ }\mu\text{g/m}^3\text{N}$ | -                               |

【Measurement value】 Carbonizing equipment

| Sampling date                          | May-19       | Jul-19       | Sep-19       | Nov-19       |
|----------------------------------------|--------------|--------------|--------------|--------------|
| System classification                  | No. 2 system | No. 1 system | No. 2 system | No. 1 system |
| Dust (g/m <sup>3</sup> N)              | -            | 0.001        | -            | -            |
| Sulfur oxides (K value)                | 1.44         | 2.45         | 0.75         | 0.99         |
| Nitrogen oxides (ppm)                  | -            | 13           | -            | -            |
| Hydrogen chloride (g/m <sup>3</sup> N) | -            | 20.0         | -            | -            |
| Dioxins (ng-TEQ/m <sup>3</sup> N)      | -            | 0.0000027    | -            | -            |
| Dioxins (dust)<br>(ng-TEQ/ g -dry)     | -            | 0.0025       | -            | -            |
| Mercury ( $\mu\text{g/m}^3\text{N}$ )  | -            | 21           | -            | 6.9          |

| Sampling date                          | Jan-20       | Mar-20       |  |  |
|----------------------------------------|--------------|--------------|--|--|
| System classification                  | No. 2 system | No. 1 system |  |  |
| Dust (g/m <sup>3</sup> N)              | 0.001        | -            |  |  |
| Sulfur oxides (K value)                | 0.42         | 1.23         |  |  |
| Nitrogen oxides (ppm)                  | 14           | -            |  |  |
| Hydrogen chloride (g/m <sup>3</sup> N) | 8.5          | -            |  |  |
| Dioxins (ng-TEQ/m <sup>3</sup> N)      | 0.000090     | -            |  |  |
| Dioxins (dust)<br>(ng-TEQ/ g -dry)     | 0.0000020    | -            |  |  |
| Mercury ( $\mu\text{g/m}^3\text{N}$ )  | 25           | -            |  |  |

【Measurement value】 Power generation facilities

| Sampling date             | May-19 | Jul-19 | Sep-19 | Nov-19 |
|---------------------------|--------|--------|--------|--------|
| Dust (g/m <sup>3</sup> N) | -      | <0.001 | -      | -      |
| Sulfur oxides (K value)   | 0.03   | <0.01  | 0.03   | 0.01   |
| Nitrogen oxides (ppm)     | -      | 120    | -      | -      |

| Sampling date             | Feb-20 | Mar-20 |  |  |
|---------------------------|--------|--------|--|--|
| Dust (g/m <sup>3</sup> N) | <0.001 | -      |  |  |
| Sulfur oxides (K value)   | 0.010  | 0.04   |  |  |
| Nitrogen oxides (ppm)     | 130    | -      |  |  |