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1 Honsha Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	142	*3
		150	82.1
	Gas turbine	50	*3
		35	*3
Furnace	190	69.4	
	144	39.3	
Soot dust	Boiler	0.2	*3
		0.1	Less than 0.01
	Gas turbine	0.05	*3,4
		0.2	Less than 0.02
SOx	(Total amount regulation)	63.99	6.96

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³;

SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance)

*2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment. The measured value is oxygen corrected.

For SOx, it is a calculated value based on the Aichi prefectural ordinance.

*3 Measurement not carried out because the equipment is inactive.

*4 Since the frequency of measurement is once every five years, there are no measurement results for FY2018.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.4-7.1
BOD	25 (20)	1.3
COD	-	5.0
SS	30 (20)	1.6
Oil	5	0.6
Copper	1	0.01
Fluorine	8	0.09
Zinc	2	0.29
Soluble iron	10	0.06
Soluble manganese	10	0.10
Total nitrogen	243.6	117.6
Total phosphorus	28.48	6.98

*For pH, range is indicated.

Note:

· The regulation values of BOD and SS are indicated by "maximum (daily average)".

· Units are mg/L except for pH.

· Units for total nitrogen and total phosphorus are kg/day.

· All other regulation items not stated are below the quantifying lower limit (not detected). Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropane, thiuram, simazine, thiobencarb, benzene, and selenium

· pH: Hydrogen ion concentration · BOD: Biochemical oxygen demand

· COD: Chemical oxygen demand · SS: Concentration of suspended solids in water

■ Total CO₂ emissions: 62,500 tons-CO₂

■ Waste generation amount: 1,300 tons

■ PRTR emissions: 3.4 tons

2 Environment-related accidents and lawsuits, etc.

■ One incident of non-compliance

- Refer to p. 55 of the Environmental Report 2018

- The number of non-compliance and complaints is based on company standards

2 Motomachi Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	104	86.8
		80	61.1
		120	*3
		150	45.8
	Drying furnace	144	83.9
Gas engine	184	36.2	
	200	167.5	
Soot dust	Boiler	0.05	*4
		0.1	Less than 0.01
		0.2	*3
	Drying furnace	0.3	Less than 0.01
Gas engine	0.2	Less than 0.01	
	0.05	Less than 0.01	
VOC	Painting facility	700	206
		400	11
	Cleaning facility	400	33
SOx	(Total amount regulation)	74.62	16.28

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³;

VOC: ppmC; SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance)

*2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment. The measured value is oxygen corrected.

For SOx, it is a calculated value based on the Aichi prefectural ordinance.

*3 Measurement not carried out because the equipment is inactive.

*4 Since the frequency of measurement is once every five years, there are no measurement results for FY2018.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.5-7.0
BOD	25 (20)	2.6
COD	-	4.8
SS	30 (20)	1.5
Oil	5	0.4
Copper	1	0.01
Fluorine	8	0.58
Zinc	2	0.34
Soluble iron	5	Less than 0.05
Soluble manganese	5	0.11
Total nitrogen	260.8	52.4
Total phosphorus	25.88	4.09

*For pH, range is indicated.

Note:

· The regulation values of BOD and SS are indicated by "maximum (daily average)".

· Units are mg/L except for pH.

· Units for total nitrogen and total phosphorus are kg/day.

· All other regulation items not stated are below the quantifying lower limit (not detected). Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropane, thiuram, simazine, thiobencarb, benzene, and selenium

· pH: Hydrogen ion concentration · BOD: Biochemical oxygen demand

· COD: Chemical oxygen demand · SS: Concentration of suspended solids in water

■ Total CO₂ emissions: 93,400 tons-CO₂

■ Waste generation amount: 3,300 tons

■ PRTR emissions: 143.7 tons

2 Environment-related accidents and lawsuits, etc.

■ None

3 Kamigo Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	144	75.4
		150	87.6
	Drying furnace	237	46.2
	Melting furnace	190	51.8
		171	^{*3}
	144	81.3	
Furnace	144	49.1	
Gas turbine	56	^{*3}	
Soot dust	Boiler	0.1	Less than 0.01
		0.3	Less than 0.01
	Drying furnace	0.2	Less than 0.01
	Melting furnace	0.1	Less than 0.01
		0.2	0.02
	Furnace	0.2	0.02
Gas turbine	0.05	^{*3}	
SOx	Total amount regulation	40.32	5.58
Dioxin	Melting furnace	1	0.23
		5	0.075
Drying furnace	1	0.000005	

^{*1} Regulation value unit: NOx: ppm; soot dust: g/Nm³;

SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance); dioxin: ng-TEQ/Nm³

^{*2} Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.

The measured value is oxygen corrected.

For SOx, it is a calculated value based on the Aichi prefectural ordinance.

^{*3} Measurement not carried out because the equipment is inactive.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.8-7.2
BOD	25 (20)	1.9
COD	-	6.6
SS	30 (20)	0.4
Oil	5	0.6
Copper	1	Less than 0.01
Fluorine	8	0.18
Zinc	2	0.09
Soluble iron	5	Less than 0.05
Soluble manganese	5	Less than 0.05
Total nitrogen	168.1	25.8
Total phosphorus	18.54	0.48

*For pH, range is indicated.

Note:

- The regulation values of BOD and SS are indicated by "maximum (daily average)".

- Units are mg/L except for pH.

- Units for total nitrogen and total phosphorus are kg/day.

- All other regulation items not stated are below the quantifying lower limit (not detected).

Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropene, thiuram, simazine, thiobencarb, benzene, and selenium

- pH: Hydrogen ion concentration - BOD: Biochemical oxygen demand

- COD: Chemical oxygen demand - SS: Concentration of suspended solids in water

- Total CO₂ emissions: 119,200 tons-CO₂
- Waste generation amount: 4,000 tons
- PRTR emissions: 8.2 tons

2 Environment-related accidents and lawsuits, etc.

- None

4 Takaoka Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	144	85.1
		150	83.1
	Drying furnace	184	74.3
	Gas turbine	35	22.2
	Gas engine	50	31.9
Soot dust	Boiler	0.1	^{*3}
		0.3	0.0096
	Drying furnace	0.2	0.0061
	Gas turbine	0.05	^{*3}
VOC	Painting facility	400	80
		700	92
	Cleaning facility	400	12
SOx	Total amount regulation	47.52	3.63

^{*1} Regulation value unit: NOx: ppm; soot dust: g/Nm³; VOC: ppmC;

SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance)

^{*2} Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.

The measured value is oxygen corrected.

For SOx, it is a calculated value based on the Aichi prefectural ordinance.

^{*3} Since the frequency of measurement is once every five years, there are no measurement results for FY2018.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.5-7.7
BOD	25 (20)	3.5
COD	-	17.3
SS	30 (20)	3.2
Oil	5	0.3
Copper	1	0.01
Fluorine	8	1.17
Zinc	2	0.61
Soluble iron	5	0.32
Soluble manganese	5	0.41
Total nitrogen	182.0	47.7
Total phosphorus	19.69	2.63

*For pH, range is indicated.

Note:

- The regulation values of BOD and SS are indicated by "maximum (daily average)".

- Units are mg/L except for pH.

- Units for total nitrogen and total phosphorus are kg/day.

- All other regulation items not stated are below the quantifying lower limit (not detected).

Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropene, thiuram, simazine, thiobencarb, benzene, and selenium

- pH: Hydrogen ion concentration - BOD: Biochemical oxygen demand

- COD: Chemical oxygen demand - SS: Concentration of suspended solids in water

- Total CO₂ emissions: 100,000 tons-CO₂
- Waste generation amount: 3,800 tons
- PRTR emissions: 88.4 tons

2 Environment-related accidents and lawsuits, etc.

- None

5 Miyoshi Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}	
NOx	Boiler	144	80.4	
		144	76.8	
		171	48.9	
	Furnace	190	16.2	
		Gas turbine	35	* ³
		Diesel engine	200	136.8
Soot dust	Gas engine	200	175.6	
		Boiler	0.3	Less than 0.01
	Furnace	0.2	0.02	
		Gas turbine	0.05	* ³
	Diesel engine	0.1	Less than 0.01	
		Gas engine	0.05	Less than 0.01
SOx	(Total amount regulation)	17.17	2.88	

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³;

SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance)

*2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.

The measured value is oxygen corrected.

For SOx, it is a calculated value based on the Aichi prefectural ordinance.

*3 Measurement not carried out because the equipment is inactive.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.7-7.2
BOD	25 (20)	3.7
COD	-	4.4
SS	30 (20)	0.7
Oil	5	0.9
Copper	1	Less than 0.01
Fluorine	8	0.11
Zinc	2	0.16
Soluble iron	5	Less than 0.05
Soluble manganese	5	0.13
Total nitrogen	37.9	19.7
Total phosphorus	4.33	0.30

*For pH, range is indicated.

Note:

- The regulation values of BOD and SS are indicated by *maximum (daily average)*.

- Units are mg/L except for pH.

- Units for total nitrogen and total phosphorus are kg/day.

- All other regulation items not stated are below the quantifying lower limit (not detected).

Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropene, thiuram, simazine, thiobencarb, benzene, and selenium

- pH: Hydrogen ion concentration - BOD: Biochemical oxygen demand

- COD: Chemical oxygen demand - SS: Concentration of suspended solids in water

- Total CO₂ emissions: 50,300 tons-CO₂
- Waste generation amount: 1,100 tons
- PRTR emissions: 3.3 tons

2 Environment-related accidents and lawsuits, etc.

- None

6 Tsutsumi Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	150	95.6
		144	68.2
	Melting furnace	144	42.2
	Drying furnace	184	83.5
	Gas turbine	35	20.1
	Gas engine	200	139.1
Soot dust	Boiler	0.3	Less than 0.01
		0.1	Less than 0.01
	Melting furnace	0.2	Less than 0.01
	Drying furnace	0.2	0.01
	Gas turbine	0.03	* ³
	Gas engine	0.05	Less than 0.01
VOC	Painting facility	700	122
		400	* ⁴
	Cleaning facility	400	16
SOx	(Total amount regulation)	57.95	1.68
Dioxin	Melting furnace	5	0.56

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³;

VOC: ppmC, SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance); dioxin: ng-TEQ/Nm³

*2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.

The measured value is oxygen corrected.

For SOx, it is a calculated value based on the Aichi prefectural ordinance.

*3 Measurement not carried out because the equipment is inactive.

*4 Since the frequency of measurement is once every five years, there

are no measurement results for FY2018.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.8-7.1
BOD	25 (20)	3.3
COD	-	12.3
SS	30 (20)	2.8
Oil	5	0.3
Copper	1	0.01
Fluorine	8	1.46
Zinc	2	0.49
Soluble iron	5	0.12
Soluble manganese	5	0.14
Total nitrogen	178.4	47.8
Total phosphorus	21.00	3.36

*For pH, range is indicated.

Note:

- The regulation values of BOD and SS are indicated by *maximum (daily average)*.

- Units are mg/L except for pH.

- Units for total nitrogen and total phosphorus are kg/day.

- All other regulation items not stated are below the quantifying lower limit (not detected).

Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropene, thiuram, simazine, thiobencarb, benzene, and selenium

- pH: Hydrogen ion concentration - BOD: Biochemical oxygen demand

- COD: Chemical oxygen demand - SS: Concentration of suspended solids in water

- Total CO₂ emissions: 126,000 tons-CO₂
- Waste generation amount: 2,900 tons
- PRTR emissions: 73.7 tons

2 Environment-related accidents and lawsuits, etc.

- None

7 Myochi Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	150	78.0
		144	99.5
		171	84.5
	Furnace	144	110.0
		218	41.7
	Drying furnace	184	71.3
		171	*3
	Melting furnace	144	62.7
		56	45.8
	Gas turbine	200	155.4
Soot dust	Boiler	0.1	*4
		0.3	0.0041
	Furnace	0.2	Less than 0.002
	Drying furnace	0.2	0.0036
	Melting furnace	0.2	0.0127
	Gas turbine	0.05	*4
SOx	[Total amount regulation]	11.10	1.12
		11.10	1.12
Dioxin	Melting furnace	5	0.038
	Sand regeneration furnace	1	0.0090

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³; SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance); dioxin: ng-TEQ/Nm³

*2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.

The measured value is oxygen corrected. For SOx, it is a calculated value based on the Aichi prefectural ordinance.

*3 Measurement not carried out because the equipment is inactive.

*4 Since the frequency of measurement is once every five years, there are no measurement results for FY2018.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	7.2-7.8
BOD	25 (20)	2.0
COD	-	5.4
SS	30 (20)	1.2
Oil	5	0.2
Copper	1	Less than 0.01
Fluorine	8	0.12
Zinc	2	0.11
Soluble iron	5	Less than 0.05
Soluble manganese	5	0.11
Total nitrogen	42.7	3.4
Total phosphorus	4.89	0.92

*For pH, range is indicated.

Note:

· The regulation values of BOD and SS are indicated by "maximum (daily average)".

· Units are mg/L except for pH.

· Units for total nitrogen and total phosphorus are kg/day.

· All other regulation items not stated are below the quantifying lower limit (not detected).

Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropene, thiuram, simazine, thiobencarb, benzene, and selenium

· pH: Hydrogen ion concentration · BOD: Biochemical oxygen demand

· COD: Chemical oxygen demand · SS: Concentration of suspended solids in water

- Total CO₂ emissions: 75,000 tons-CO₂
- Waste generation amount: 7,700 tons
- PRTR emissions: 0.5 tons

2 Environment-related accidents and lawsuits, etc.

- None

8 Shimoyama Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	150	68.6
		35	*3
	Gas engine	200	155.2
Soot dust	Boiler	0.1	0.0046
		0.05	*3
	Gas engine	0.05	0.0057
SOx	[Total amount regulation]	11.46	0.00
		11.46	0.00

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³; SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance)

*2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.

The measured value is oxygen corrected. For SOx, it is a calculated value based on the Aichi prefectural ordinance.

*3 Measurement not carried out because the equipment is inactive.

*4 Since the frequency of measurement is once every five years, there are no measurement results for FY2018.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.8-7.6
BOD	25 (20)	1.6
COD	-	8.4
SS	30 (20)	1.0
Oil	5	0.4
Copper	1	Less than 0.01
Fluorine	8	0.11
Zinc	2	0.05
Soluble iron	5	Less than 0.05
Soluble manganese	5	Less than 0.05
Total nitrogen	21.9	11.4
Total phosphorus	2.61	1.35

*For pH, range is indicated.

Note:

· The regulation values of BOD and SS are indicated by "maximum (daily average)".

· Units are mg/L except for pH.

· Units for total nitrogen and total phosphorus are kg/day.

· All other regulation items not stated are below the quantifying lower limit (not detected).

Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropene, thiuram, simazine, thiobencarb, benzene, and selenium

· pH: Hydrogen ion concentration · BOD: Biochemical oxygen demand

· COD: Chemical oxygen demand · SS: Concentration of suspended solids in water

- Total CO₂ emissions: 32,100 tons-CO₂
- Waste generation amount: 500 tons
- PRTR emissions: 0.3 tons

2 Environment-related accidents and lawsuits, etc.

- None

9 Kinuura Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{**2}
NOx	Boiler	130	39.2
		150	52.1
	Furnace	144	119
Soot dust	Melting furnace	171	46.4
	Boiler	0.1	0.01
	Furnace	0.2	0.05
SOx	Melting furnace	0.2	Less than 0.01
		[Total amount regulation]	6.06
Dioxin	Melting furnace	5	0.42

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³;

SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance); dioxin: ng-TEQ/Nm³

**2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.

The measured value is oxygen corrected.

For SOx, it is a calculated value based on the Aichi prefectural ordinance.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.0-9.0	7.0-7.7
BOD	-	6.8
COD	25 (20)	7.4
SS	30 (20)	3.3
Oil	5	0.7
Copper	1	Less than 0.01
Fluorine	15	0.23
Zinc	2	0.19
Soluble iron	5	0.20
Soluble manganese	5	0.05
Total nitrogen	51.9	14.3
Total phosphorus	6.36	0.66

*For pH, range is indicated.

Note:

- The regulation values of COD and SS are indicated by "maximum (daily average)".

- Units are mg/L except for pH.

- Units for total nitrogen and total phosphorus are kg/day.

- All other regulation items not stated are below the quantifying lower limit (not detected).
Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropane, thiuram, simazine, thiobencarb, benzene, and selenium

- pH: Hydrogen ion concentration - BOD: Biochemical oxygen demand

- COD: Chemical oxygen demand - SS: Concentration of suspended solids in water

- Total CO₂ emissions: 92,000 tons-CO₂
- Waste generation amount: 1,000 tons
- PRTR emissions: 0.8 tons

2 Environment-related accidents and lawsuits, etc.

- None

10 Tahara Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{**2}	
NOx	Boiler	142	49.6	
		120	^{*3}	
		80	52.3	
	Furnace	144	49.6	
		Drying furnace	184	68.3
	Melting furnace	144	9.0	
	Waste incinerator	200	40.3	
	Gas turbine	56	33.8	
	Gas engine	200	114.3	
Soot dust	Boiler	0.05	Less than 0.01	
		0.2	Less than 0.01	
	Furnace	0.2	0.01	
	Drying furnace	0.2	Less than 0.01	
	Melting furnace	0.2	Less than 0.01	
	Waste incinerator	0.08	^{*3}	
VOC	Painting facility	0.15	Less than 0.01	
		0.05	Less than 0.01	
	Gas engine	0.05	Less than 0.01	
SOx	Cleaning facility	700	478	
		400	28	
Dioxin	Sand regeneration furnace	[Total amount regulation]	22.75	3.31
		5	0.064	
		1	^{*3}	
		5	0	

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³; VOC: ppmC; SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance); dioxin: ng-TEQ/Nm³

**2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.

The measured value is oxygen corrected.

For SOx, it is a calculated value based on the Aichi prefectural ordinance.

^{*3} Measurement not carried out because the equipment is inactive.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.0-9.0	6.9-7.6
BOD	-	1.9
COD	25 (20)	9.5
SS	30 (20)	2.2
Oil	2	0.2
Copper	1	Less than 0.01
Fluorine	15	1.67
Zinc	2	0.37
Soluble iron	10	Less than 0.05
Soluble manganese	10	0.07
Total nitrogen	314.3	60.6
Total phosphorus	35.15	4.18
Lead	0.1	Less than 0.01

*For pH, range is indicated.

Note:

- The regulation values of COD and SS are indicated by "maximum (daily average)".

- Units are mg/L except for pH.

- Units for total nitrogen and total phosphorus are kg/day.

- All other regulation items not stated are below the quantifying lower limit (not detected).
Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropane, thiuram, simazine, thiobencarb, benzene, and selenium

- pH: Hydrogen ion concentration - BOD: Biochemical oxygen demand

- COD: Chemical oxygen demand - SS: Concentration of suspended solids in water

- Total CO₂ emissions: 174,400 tons-CO₂
- Waste generation amount: 3,800 tons
- PRTR emissions: 182.6 tons

2 Environment-related accidents and lawsuits, etc.

- None

11 Teiho Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	150	56.2
	Boiler	0.1	^{**}
Soot dust	Drying furnace	0.2	Less than 0.01
SOx	(Total amount regulation)	1.66	0.00

^{*1} Regulation value unit: NOx: ppm; soot dust: g/Nm³;
SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance)
^{*2} Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.
The measured value is oxygen corrected.
For SOx, it is a calculated value based on the Aichi prefectural ordinance.
^{*3} Since the frequency of measurement is once every five years, there are no measurement results for FY2018.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.6-7.4
BOD	25 (20)	4.2
COD	-	7.8
SS	30 (20)	1.0
Oil	2	0.3
Copper	1	0.02
Fluorine	8	0.11
Zinc	2	0.17
Soluble iron	5	Less than 0.05
Soluble manganese	5	Less than 0.05
Total nitrogen	7.2	3.6
Total phosphorus	0.72	0.24

^{*}For pH, range is indicated.
Note:
- The regulation values of BOD and SS are indicated by "maximum (daily average)".
- Units are mg/L except for pH.
- Units for total nitrogen and total phosphorus are kg/day.
- All other regulation items not stated are below the quantifying lower limit (not detected).
Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropane, thiuram, simazine, thiobencarb, benzene, and selenium
- pH: Hydrogen ion concentration - BOD: Biochemical oxygen demand
- COD: Chemical oxygen demand - SS: Concentration of suspended solids in water

■ Total CO₂ emissions: 10,500 tons-CO₂
■ Waste generation amount: 10 tons

2 Environment-related accidents and lawsuits, etc.

■ None

12 Hirose Plant

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	150	75.1
	Gas turbine	35	^{**}
	Diesel engine		500
		400	329
Soot dust	Boiler	0.1	^{**}
	Gas turbine	0.05	^{**}
	Diesel engine	0.1	0.03
SOx	(Total amount regulation)	1.06	0.00

^{*1} Regulation value unit: NOx: ppm; soot dust: g/Nm³;
SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance)
^{*2} Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.
The measured value is oxygen corrected.
For SOx, it is a calculated value based on the Aichi prefectural ordinance.
^{*3} Measurement not carried out because the equipment is inactive.
^{*4} Since the frequency of measurement is once every five years, there are no measurement results for FY2018.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	7.1-7.8
BOD	25 (20)	3.9
COD	-	3.8
SS	30 (20)	1.2
Oil	2	0.9
Copper	1	Less than 0.01
Fluorine	8	0.93
Zinc	2	0.08
Soluble iron	10	Less than 0.05
Soluble manganese	10	Less than 0.05
Total nitrogen	44.1	3.2
Total phosphorus	2.75	0.98

^{*}For pH, range is indicated.
Note:
- The regulation values of BOD and SS are indicated by "maximum (daily average)".
- Units are mg/L except for pH.
- Units for total nitrogen and total phosphorus are kg/day.
- All other regulation items not stated are below the quantifying lower limit (not detected).
Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropane, thiuram, simazine, thiobencarb, benzene, and selenium
- pH: Hydrogen ion concentration - BOD: Biochemical oxygen demand
- COD: Chemical oxygen demand - SS: Concentration of suspended solids in water

■ Total CO₂ emissions: 37,700 tons-CO₂
■ Waste generation amount: 700 tons
■ PRTR emissions: 28.9 tons

2 Environment-related accidents and lawsuits, etc.

■ None

13 Head Office Technology Site

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	150	79.8
	Gas turbine	35	13.3
	Gas engine	200	162.1
Soot dust	Boiler	0.1	Less than 0.01
	Drying furnace	0.2	Less than 0.02
	Gas turbine	0.05	^{**}
	Gas engine	0.05	Less than 0.005
VOC	Painting facility	700	144

^{*1} Regulation value unit: NOx: ppm; soot dust: g/Nm³; VOC: ppmC
^{*2} Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.
The measured value is oxygen corrected.
^{*3} Since the frequency of measurement is once every five years, there are no measurement results for FY2018.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

As wastewater and PRTR emissions are processed at the Honsha Plant wastewater treatment plant, refer to the water quality data of Honsha Plant.

■ Total CO₂ emissions: 85,400 tons-CO₂
■ Waste generation amount: 1,100 tons

2 Environment-related accidents and lawsuits, etc.

■ None

14 Higashi-Fuji Technical Center

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	180	110.13
	Gas turbine	70	38.8
	Diesel engine	950	798.5
Soot dust	Boiler	0.3	0.0108
	Gas turbine	0.05	0.0144
	Diesel engine	0.1	0.0139

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³

*2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.
The measured value is oxygen corrected.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.6-7.4
BOD	25 (20)	6.3
COD	—	6.6
SS	70 (50)	1.8
Oil	5	0.2
Copper	1	Less than 0.01
Fluorine	8	Less than 0.08
Zinc	2	Less than 0.01
Soluble iron	10	0.09
Soluble manganese	10	Less than 0.01

*For pH, range is indicated.

Note:

- The regulation values of BOD and SS are indicated by "maximum (daily average)".
- Units are mg/L, except for pH.
- Units for total nitrogen and total phosphorus are kg/day.
- All other regulation items not stated are below the quantifying lower limit (not detected).
- Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropene, thiuram, simazine, thiobencarb, benzene, and selenium
- pH: Hydrogen ion concentration - BOD: Biochemical oxygen demand
- COD: Chemical oxygen demand - SS: Concentration of suspended solids in water

- Total CO emissions: 18,500 tons-CO₂
- Waste generation amount: 400 tons
- PRTR emissions: 0.5 tons

2 Environment-related accidents and lawsuits, etc.

- None

15 Shibetsu Proving Ground

1 Environmental Data

■ Air (Air Pollution Control Law, Hokkaido ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	180	93
Soot dust		0.3	Less than 0.01

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³

*2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.
The measured value is oxygen corrected.

■ Water quality (Water Pollution Control Law, Hokkaido ordinance)

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.9-8.1
BOD	30 (24)	18.0
SS	50 (40)	19.0
Oil	5	Less than 0.5

*For pH, range is indicated.

Note:

- The regulation values of BOD and SS are indicated by "maximum (daily average)".
- COD is not measured because there is no legal standard.
- Units are mg/L, except for pH.
- Units for total nitrogen and total phosphorus are kg/day.
- All other regulation items not stated are below the quantifying lower limit (not detected).
- Other regulation items: phenol, cadmium, cyanogen, organic phosphorus, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCB, total chromium, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropene, thiuram, simazine, thiobencarb, benzene, and selenium
- pH: Hydrogen ion concentration - BOD: Biochemical oxygen demand
- COD: Chemical oxygen demand - SS: Concentration of suspended solids in water

- Total CO₂ emissions: 2,100 tons-CO₂
- Waste generation amount: 50 tons
- PRTR emissions: 0.03 tons

2 Environment-related accidents and lawsuits, etc.

- None

16 Head Office Management Site

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	144	91.3
		150	54.9
	Gas turbine	35	**3
	Drying furnace	144	41.1
Soot dust	Boiler	0.3	Less than 0.02
		0.1	Less than 0.02
	Gas turbine	0.05	**3
	Drying furnace	0.2	Less than 0.02
	Furnace	0.2	Less than 0.02

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³

*2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment.
The measured value is oxygen corrected.

*3 Measurement not carried out because the equipment is inactive.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

As wastewater and PRTR emissions are processed at the Honsha Plant wastewater treatment plant, refer to the water quality data of Honsha Plant.

- Total CO₂ emissions: 45,100 tons-CO₂
- Waste generation amount: 400 tons

2 Environment-related accidents and lawsuits, etc.

- None

17 Tokyo Management Site

1 Environmental Data

■ Air (Air Pollution Control Law, metropolitan ordinance)

■ Total CO₂ emissions: 2,900 tons-CO₂
 ■ Waste generation amount: 200 tons

Tokyo Building

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
Soot dust	Boiler	0.15	Less than 0.01

^{*1} Regulation value unit: Soot dust: g/Nm³; oxygen conversion value (4 vol%)

^{*2} The measurement value indicates the maximum value recorded in the annual measurements.

^{*3} The measurement value of NOx is not stated because it is not subject to measurement under the law and a Tokyo Metropolitan Ordinance.

^{*4} Boiler operating period: From the end of November to the end of March of the following year (for humidification)

2 Environment-related accidents and lawsuits, etc.

■ None

18 Nagoya Management Site

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

■ Total CO₂ emissions: 4,100 tons-CO₂
 ■ Waste generation amount: 80 tons

Nisshin Training Center

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Absorption cold/warm water generator	150	28.6
	Warm water generator 1	150	35.9
	Warm water generator 2	150	36.2
Soot dust	Absorption cold/warm water generator	0.1	Less than 0.01
	Warm water generator 1	0.1	Less than 0.01
	Warm water generator 2	0.1	Less than 0.01

^{*1} Regulation value unit: NOx: ppm; soot dust: g/Nm³

^{*2} NOx measurement value indicates the measurement result with respect to the regulation value for the corresponding equipment.

^{*3} Since the frequency of measurement is once every five years, there are no measurement results for FY2018.

2 Environment-related accidents and lawsuits, etc.

■ None

19 Logistics Management Site

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Tobishima Logistics Center

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
			Maximum
NOx	Boiler	144	94.3
		120	93.5
Soot dust	Boiler	0.15	Less than 0.015
SOx	(Total amount regulation)	0.85	0.78

Kamigo Logistics Center

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	144	*3
Soot dust	Boiler	0.2	*3

Nagoya Wharf Center

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Boiler	237	*3
Soot dust	Boiler	0.15	*3

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³;

SOx: Nm³/H (SOx is the total amount regulation for the Aichi prefectural ordinance)

*2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment. The measured value is oxygen corrected.

For SOx, it is a calculated value based on the Aichi prefectural ordinance.

*3 Measurement not carried out because the equipment is inactive.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

Tobishima Logistics Center

Item	Regulation value	Measurement value
		Maximum
pH*	5.0-9.0	6.6-7.7
COD	40 (30)	13.5
SS	80 (60)	17.6
Oil	5	0.4
Total nitrogen	6.8	0.8
Total phosphorus	0.69	0.02

Kamigo Logistics Center

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.7-7.3
BOD	25 (20)	2.2
COD	-	5.2
SS	30 (20)	0.6
Oil	5	0.6
Total nitrogen	11.3	1.2
Total phosphorus	1.14	0.04

Nagoya Wharf Center

Item	Regulation value	Measurement value
		Maximum
pH*	5.0-9.0	6.9-8.2
COD	160 (120)	8.7
SS	70 (50)	6.4
Oil	5	Less than 0.4
Total nitrogen	5.86	0.39
Total phosphorus	0.823	0.010

Haruhi Parts Center

Item	Regulation value	Measurement value
		Maximum
pH*	5.8-8.6	6.8-7.3
BOD	40 (30)	1.6
COD	-	4.4
SS	80 (60)	5.3
Oil	5	0.1
Total nitrogen	13.6	1.4
Total phosphorus	1.36	0.04

*For pH, range is indicated.

Note:

- The regulation values of BOD, COD and SS are indicated by "maximum (daily average)".

- Units are mg/L, except for pH.

- Units for total nitrogen and total phosphorus are kg/day.

- Items such as heavy metals are not used, so they are not stated.

- pH: Hydrogen ion concentration - BOD: Biochemical oxygen demand

- COD: Chemical oxygen demand - SS: Concentration of suspended solids in water

■ Total CO₂ emissions: 10,000 tons-CO₂
 ■ Waste generation amount: 300 tons

2 Environment-related accidents and lawsuits, etc.

■ None

20 Biotechnology and Afforestation Laboratory

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

No corresponding equipment

■ Total CO₂ emissions: 400 tons-CO₂
 ■ Waste generation amount: 30 tons

2 Environment-related accidents and lawsuits, etc.

■ None

21 Environmental Center

1 Environmental Data

■ Air (Air Pollution Control Law, prefectural ordinance)

Substance name	Equipment name	Regulation value ^{*1}	Measurement value ^{*2}
NOx	Waste incinerator	111	62.2
Soot dust		0.02	Less than 0.01
Hydrogen chloride		240	47.08
Dioxin		1	0.026

*1 Regulation value unit: NOx: ppm; soot dust: g/Nm³; hydrogen chloride: ppm; dioxin: ng-TEQ/Nm³

*2 Measurement values for NOx and soot dust indicate the maximum value for the corresponding equipment. The measured value is oxygen corrected.

■ Water quality (Water Pollution Control Law, prefectural ordinance)

As wastewater is processed at the adjoining Motomachi Plant wastewater treatment plant, refer to the water quality data of Motomachi Plant.

2 Environment-related accidents and lawsuits, etc.

■ None

- For an outline of the sites, visit the Toyota Motor Corporation website.

Web <https://www.toyota-global.com/company/profile/facilities/>

- The management facilities of each work site are as follows.

Head Office Management Site

Main Building, Toyota Learning Center, Office Building 1–5, Suppliers Center, Toyota Kaikan, Powertrain Building No. 1, Production Engineering Cooperative Building, and other buildings

Tokyo Management Site

Tokyo Building and Ikebukuro Building

Nagoya Management Site

Nagoya Office

Logistics Management Site

Kamigo Logistics Center, Tobishima Logistics Center, Nagoya and Tokai Wharf Centers, Oguchi Parts Center, and Inazawa Parts Center