

# Kyocera Group Site Information

## Kyocera Corporation Kagoshima Kokubu Plant



### Profile

Location	1-1 Kokubu-Yamashita-cho, Kirishima-shi, Kagoshima
Products manufactured	Semiconductor components, electronic devices, industrial machine components, automotive components, etc.
Number of employees	3,134
Land area	264,471 m <sup>2</sup>
Total floor space	212,142 m <sup>2</sup>

### Environmental Performance

Items	Units		FY 2006		FY 2007	
	Amount	Specific consumption	Amount	Specific consumption	Amount	Specific consumption
Electricity	kWh	kWh/M Yen	192,815,579	2,168	195,375,786	2,104
Fuel (natural gas, propane, A heavy oil, kerosene, diesel fuel, gasoline)	kℓ (crude-oil based)	kℓ/M Yen	11,406	0.128	11,992	0.129
CO <sub>2</sub>	t-CO <sub>2</sub>	t-CO <sub>2</sub> /M Yen	89,166	1.00	90,853	0.98
Water	m <sup>3</sup>	m <sup>3</sup> /M Yen	1,880,581	21.1	1,885,984	20.3
Industrial waste emissions	kg	kg/M Yen	2,816,643	31.7	2,650,952	28.5
Effluent	m <sup>3</sup>	m <sup>3</sup> /M Yen	1,999,371	22.5	2,007,856	21.6

#### Comments

The amount of electricity consumption increased with the new installation of a kiln for our electronic products business but the production value also increased allowing us to improve in terms of specific consumption per net sales.

We were able to convert waste plastic emitted by the manufacturing process into useful resources which allowed us to reduce industrial waste emission in terms of both amount and specific consumption per net sales.

### Air related

Items	Facility	Legal standard	Internal criteria	Self-management standard	Performance for FY 2007		
					Ave	Max	Measurement frequency
Soot and dust (g/Nm <sup>3</sup> )	Energy building small-size boiler No. 1	0.1	0.08	0.018	<0.005	<0.005	Once/every 5 years
	Large gas oven No. 1	0.25	0.2	0.07	<0.005	<0.005	Twice/year
	Toluene deodorizing boiler	0.1	0.08	0.018	<0.005	<0.005	Once/every 5 years
NO <sub>x</sub> (ppm)	Energy building small-size boiler No. 1	150	120	108	55	61	Twice/year
	Large gas oven No. 1	180	144	130	20	28	Twice/year
	Toluene deodorizing boiler	150	144	108	30	35	Twice/year
SO <sub>x</sub> (Nm <sup>3</sup> /h)	N/A			—			

### Air emission: total impact (units: tons)

Items	Total emission	
	FY 2006	FY 2007
NO <sub>x</sub>	17.89	29.19
SO <sub>x</sub>	N/A	

#### Comments

Less than self-management standards, no incidents exceeded standards.

### Water quality (units: mg/ℓ)

Items	Legal standard	Internal criteria	Self-management standard	Performance for FY 2007		
				Ave	Max	Measurement frequency
Hydrogen ion concentration (pH)	5.8~8.5	6.2~8.2	6.6~8.0	7.2	7.7	Once/week
Biochemical oxygen demand (BOD)	30	10	9.5	3.3	6.1	Once/week
Chemical oxygen demand (COD)	—	10	9.5	5.1	7.8	Once/daily
Suspended solid (SS)	30	5	4.8	1.9	3.6	Once/week
N-hexane extracts weight	5	1	0.95	<0.5	<0.5	Once/month
Phenols content	5	0.5	0.45	<0.01	<0.01	Once/year
Copper content	3	1	0.05	<0.01	<0.01	Once/month
Zinc content	2	1	0.14	0.04	0.12	Once/month
Dissolved iron content	10	5	0.2	0.03	0.07	Once/month
Dissolved manganese content	10	5	0.13	0.02	0.03	Once/month
Coliform group number (colonies/ ml)	3,000	350	189	66	160	Once/month
Nitrogen content	60	60	5.5	2.1	3.7	Once/month
Phosphorous content	8	8	0.88	0.03	0.06	Once/month

### Water pollution: total impact (units: tons)

Items	Total emission	
	FY 2006	FY 2007
Chemical oxygen demand (COD)	8.98	9.94
Biochemical oxygen demand (BOD)	6.29	6.8
Nitrogen	6.98	5.12
Phosphorous	0.74	0.34

#### Comments

Less than self-management standards, no incidents exceeded standards.

### Bad odors

No incidents exceeded standards.

### Noise and vibration

No incidents exceeded standards.

### PRTR substances (units: tons)

Number	Substance	Handled amounts	Releases to			Transfers to		Other amounts		
			Air	Water	Soil	Waste	Sewage	Recycled	Consumption	Removed by process
40	Ethyl benzene	14.0	2.5	0	0	0.2	0	11.3	0	0
45	Ethyl glycol monomethyl ether	1.6	1.4	0	0	0.2	0	0	0	0
63	Xylene	12.7	3.1	0	0	1.9	0	7.5	0.2	0
64	Silver and its water-soluble compounds	8.2	0	0	0	0.8	0	0.5	6.9	0
68	Chrome and trivalent chrome compounds	9.9	0	0	0	0.1	0	5.6	4.1	0
100	Cobalt and its compounds	1.2	0	0	0	0.1	0	0.1	1.0	0
108	Inorganic cyan compounds	3.8	0	0	0	0	0	2.0	1.8	0
179	Dioxins (mg-TEQ)	0.00014	0.00003	0	0	0.00011	0	0	0	0
207	Copper water-soluble salts (except complex salts)	7.4	0	0.1	0	0	0	0	0.1	7.3
224	1,3,5-trimethylbenzene	1.9	0	0	0	0	0	1.6	0.3	0
227	Toluene	275.6	33.2	0	0	11.8	0	144.5	85.6	0.5
230	Lead and its compounds	79.2	0	0	0	18.2	0	0.1	60.9	0
231	Nickel	70.6	0	0	0	0.3	0	10.1	60.2	0
232	Nickel compounds	8.0	0	0.1	0	0.7	0	2.3	5.0	0
243	Barium and its water-soluble compounds	2.2	0	0	0	0.2	0	2.1	0	0
266	Phenol	5.7	0	0	0	5.5	0	0	0.2	0
270	di-ne-butyl phthalate	20.4	1.2	0	0	0.8	0	1.3	15.2	1.9
272	bis (2-ethylhexyl) phthalate	15.3	0.2	0	0	1.5	0	1.8	11.4	0.5
304	boron and its compounds	4.3	0	0.3	0	0.8	0	1.4	1.8	0
309	poly (oxyethylene) nonylphenyl ether	1.0	0	0	0	0.9	0	0	0	0
311	Manganese and its compounds	4.5	0	0	0	0.1	0	0.4	4.0	0
346	Molybdenum and its compounds	5.2	0	0	0	0.1	0	2.5	2.5	0
Target chemical substances total		552.6	41.6	0.5	0	44.2	0	195.0	261.0	10.2

#### Comments

The amount of toluene handled for FY2007 increased with the increase in glass tape production but there was no increase in amounts released to air as a result of improved recovering efficiency of toluene emitted gases. And as a result of improvement for other substances, we reduced both releases and transfers.