

Kyocera Group Site Information

Kyocera Corporation Nagano Okaya Plant



Profile

Location	3-11-1 Kohagi Osachi, Okaya, Nagano
Products manufactured	Thermal print heads, single crystal sapphire, cutting tools
Number of employees	333
Land area	80,068m ²
Total floor space	35,504m ²

Environmental Performance

Items	Units		FY 2006		FY 2007	
	Amount	Specific consumption	Amount	Specific consumption	Amount	Specific consumption
Electricity	kWh	kWh/M Yen	27,183,085	1,644	33,650,543	2,540
Fuel (A heavy oil, kerosene)	kℓ (crude-oil based)	kℓ/M Yen	140	0.008	386	0.029
CO ₂	t-CO ₂	t-CO ₂ /M Yen	13,108	0.79	16,687	1.26
Water	m ³	m ³ /M Yen	75,839	4.59	100,304	7.57
Industrial waste emissions	kg	kg/M Yen	145,054	8.77	165,495	12.49
Effluent	m ³	m ³ /M Yen	13,214	0.80	22,059	1.67

Comments

Electricity consumption increased due to the increase in number of single crystal sapphire manufacturing systems. Fuel and water consumption increased because we started operating drying facilities. This also increased CO₂ emissions. Industrial waste disposals also increased due to the increase in production.

Air related

Items	Facility	Legal standard	Internal criteria	Self-management standard	Performance for FY 2007		
					Ave	Max	Measurement frequency
Soot and dust (g/Nm ³)	Boiler (central)	0.3	0.24	0.043	0.005	0.005	Twice/year
NOx (ppm)	Boiler (central)	180	144	106	43.5	52.0	Twice/year
SOx (Nm ³ /h)	Boiler (central)	5.8	4.7	3.8	0.1	0.1	Twice/year

Air emission: total impact (units: tons)

Items	Total emission	
	FY 2006	FY 2007
NOx	0.18	0.60
SOx	0.34	0.49

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)	5.8~8.6	6.2~8.2	6.9~7.7	7.2	7.4	Twice/month
Biochemical oxygen demand (BOD)	30	10	8	1.44	3.10	Twice/month
Chemical oxygen demand (COD)	30	10	8	1.93	3.30	Twice/month
Suspended solid (SS)	50	5	4	1.04	1.60	Twice/month
N-hexane extracts weight	5	1	1	0.38	1.10	Twice/month
Phenols content	5	0.5	0.2	<0.1	<0.1	Once/year
Copper content	3	1	0.5	0.01	0.01	Twice/month
Zinc content	5	1	0.1	<0.02	<0.02	Once/year
Dissolved iron content	10	5	3	0.06	0.10	Twice/month
Dissolved manganese content	10	5	0.5	<0.05	<0.05	Once/year
Coliform group number (colonies/ mℓ)	3,000	350	0	0	0	Once/year
Nitrogen content	40	30	15	6.51	7.80	Twice/month
Phosphorous content	5	3	1	0.03	0.05	Twice/month

Water pollution: total impact (units: tons)

Items	Total emission	
	FY 2006	FY 2007
Chemical oxygen demand (COD)	0.025	0.043
Biochemical oxygen demand (BOD)	0.018	0.032
Nitrogen	0.089	0.144
Phosphorous	0	0.001

Comments

The N-hexane extracted volume was in excess of our self-management standards but we immediately made improvements and has since not been a problem. All other items are below our self-management standards and 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
100	Cobalt	3.7	0	0	0	0.3	0	0	3.4	0
346	Molybdenum	17.0	0	0	0	0.1	0	16.9	0	0
Target chemical substances total		20.7	0	0	0	0.4	0	16.9	3.4	0

Comments

The single crystal operated its systems efficiently allowing for a reduction in the use of molybdenum compared to FY2006. Cobalt is new targeted substances as we began handling it with the start of a new business unit.