

EPEAT 4.7.2.1 Public disclosure of key environmental aspects

The following data shows key environmental aspects in the Hirooka office having complete responsibility for the design and manufacture of printers and scanners. (Fiscal Year: From April to next March)

a) Greenhouse Gas Emissions

Greenhouse gas emissions (t-CO ₂)	FY2015	FY2016
Scope 1	0.08	0.23
Scope 2	20.73	21.90
Total	20.81	22.13

●CO₂ conversion factor of greenhouse gas emissions

Power: We used an average value published by the Federation of Electric Power Companies in 2000.

We used calculations that appeared in Version 2.4 of a GHG emissions calculation and reporting manual published jointly by the Japanese Ministry of the Environment and the Japanese Ministry of Economy, Trade and Industry.

Non-CO₂ GHGs: We used calculations published by the 2001 Intergovernmental Panel on Climate Change (IPCC).

●Third-party verification of greenhouse gas (GHG) emissions

Scope 1 and 2 GHG emissions of FY2016 are verified.

b) Water

Water withdrawal (thousand m ³)	FY2015	FY2016
Municipal water	157	140
Ground water	256	246
Total	413	386
Discharge (thousand m ³)	FY2015	FY2016
Total water discharge (sewage)	373	377
Recycled water	157	165
(Ratio)	(42.1%)	(43.8%)
Reused water	0	0
(Ratio)	(0%)	(0%)

Quality of water discharge

The following table shows the water quality measurement values of the main substances in the five drainage ports for manufacturing process and living use in the Hirooka office. (No.2, 3, 5, 8, 9)

Sewage line	Item	Unit	Measurement value (average)	
			FY2015	FY2016
No.2	n-hexane (mineral oil)	mg/l	ND	ND
	n-hexane (animal/plant oil)	mg/l	5.1	4.0
No.3	BOD	mg/l	28	21.1
	SS	mg/l	22	21.3
	n-hexane (mineral oil)	mg/l	ND	ND
	n-hexane (animal/plant oil)	mg/l	2.4	1.8
	Cu	mg/l	ND	ND
	Zn	mg/l	0.09	0.02
	Fe	mg/l	0.065	0.023
	Mn	mg/l	0.01	0.006
	Cr	mg/l	ND	ND
	T-P	mg/l	1.4	1.3
	Pb	mg/l	ND	ND
	Fluorine	mg/l	0.22	0.4
	Ammonia compound, Nitrous acid, Nitric acid	mg/l	7.2	13.7
	Ammonia nitrogen	mg/l	7.5	7.5
	Nitrous acid (NO ₂)	mg/l	-	7.3
	I ₂ (amount iodine consumed)	mg/l	ND	0.9
No.5	n-hexane (mineral oil)	mg/l	ND	0.08
	n-hexane (animal/plant oil)	mg/l	4.2	3.30
No.8	BOD	mg/l	4.4	1.8
	SS	mg/l	0.6	0.3
	n-hexane (mineral oil)	mg/l	ND	ND
	n-hexane (animal/plant oil)	mg/l	ND	ND
	Cu	mg/l	ND	ND
	Zn	mg/l	0.045	0.078
	Fe	mg/l	0.01	0.003
	Mn	mg/l	ND	ND
	Cr	mg/l	ND	ND
	T-P	mg/l	ND	0.0008
	Pb	mg/l	ND	ND

	Fluorine	mg/l	ND	ND
	Ammonia compound, Nitrous acid, Nitric acid	mg/l	0.23	0.4
	Ammonia nitrogen	mg/l	ND	ND
	Nitrous acid (NO2)	mg/l	-	0.4
	I2 (amount iodine consumed)	mg/l	ND	0.5
No.9	BOD	mg/l	125	114.4
	SS	mg/l	72	71.3
	n-hexane (mineral oil)	mg/l	ND	ND
	n-hexane (animal/plant oil)	mg/l	4.9	4.8
	Cu	mg/l	ND	ND
	Zn	mg/l	0.06	0.06
	Fe	mg/l	0.13	0.1
	Mn	mg/l	ND	ND
	Cr	mg/l	ND	ND
	T-P	mg/l	7.6	7.9
	Fluorine	mg/l	ND	0.1
	Pb	mg/l	ND	ND
	Ammonia compound, Nitrous acid, Nitric acid	mg/l	23.4	29.6
	Ammonia nitrogen	mg/l	58	60.8
	Ni	mg/l	ND	ND
	I2 (amount iodine consumed)	mg/l	35	36.0
	Nitrous acid (NO2)	mg/l	ND	0.6
	Nitric acid (NO3)	mg/l	ND	ND

ND: No Detection (Below the detection limit)

-: Unmeasured

c) Waste

Waste (tons)		FY2015	FY2016
All solid waste generated		2,581	2,740
	Reused or recycled	2,253	2,354
	Landfilled	47	51
	Sent to waste-to-energy	239	287
	Incineration	43	49
	Other disposal facilities	0	0
Discards that have been reduced (from a defined base year: previous year)		272	-159

d) Toxics

FY2016 PRTR data (kg)

No.	Name	Emissions to atmosphere	Transfer to waste	Removed/ consumed
374	hydrogen fluoride and its water-soluble salts	0	0	12,795
438	Methylnaphthalene	36	0	7,138

FY2015 PRTR data (kg)

No.	Name	Emissions to atmosphere	Transfer to waste	Removed/ consumed
20	2-aminoethanol	0	1,686	0
374	hydrogen fluoride and its water-soluble salts	0	0	11,026
438	Methylnaphthalene	35	0	7,031

The calculation and protocols used are the Japanese Pollutant Release and Transfer Register (PRTR).

More details can be found on: <http://www.env.go.jp/en/chemi/prtr/about/index.html>