



# Nikon CSR REPORT **2010**

Data Collection

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## Acquisition of ISO 14001 certification [Nikon Corporation]

	Company-wide certification	Independent certification	Location
Company-wide certification	Oct. 2004	—	Tokyo
Ohi Plant	(Oct. 2004)	Jul. 1998	Tokyo
Yokohama Plant	(Oct. 2004)	Oct. 1998	Kanagawa
Mito Plant	(Jun. 2005)	Apr. 1999	Ibaraki
Head Office	(Sept. 2005)	—	Tokyo
Sagamihara Plant	(Sept. 2005)	Aug. 1998	Kanagawa
Kumagaya Plant	(Sept. 2005)	Aug. 1998	Saitama

## Acquisition of ISO 14001 certification [Group companies]

	Company-wide certification	Independent certification	Location
Sendai Nikon*1	(Apr. 2006)	Mar. 1997	Miyagi
Miyagi Nikon Precision (former Zao Nikon)	(Apr. 2006)	Mar. 1999	Miyagi
Tochigi Nikon*2	(Sept. 2006)	Sept. 1999	Tochigi
Kurobane Nikon	(Sept. 2006)	Dec. 1999	Tochigi
Nasu Nikon	—	Dec. 1999	Tochigi
Aichi Nikon	—	Dec. 1999	Aichi
Hikari Glass	(Nov. 2007)	Mar. 2004 (Akita Plant)	Chiba
Nikon Instech	(Nov. 2007)	Mar. 2004	Tokyo
Nikon TEC	(Feb. 2009)	—	Tokyo
TNI Industry Nagai Factory (former Setagaya Industry)	(Nov. 2007)	Nov. 2004	Yamagata
Nikon Vision	(Nov. 2007)	—	Tokyo
Nikon Imaging (China) Co., Ltd.	(Nov. 2007)	Jun. 2005	China
Nikon (Thailand) Co., Ltd.	(Nov. 2007)	Nov. 2006	Thailand
Hikari Glass (Changzhou) Optics Co., Ltd.	(Feb. 2009)	—	China

\*1 Including former Sendai Nikon Precision

\*2 Including Tochigi Nikon Precision

## Environmental Accounting

### Cost of environmental protection

Unit: millions of yen

	Category	Main activities	Investment	Expenses	Total
Product environment	Product development, energy efficiency, and reduction in use of hazardous chemical substances	Energy-saving design, compliance with REACH regulations, etc.	—	147	147
	Green procurement	Nikon Green Procurement Standards, etc.	—	11	11
	Packaging & distribution	Eco-friendly driving lessons, use of digital tachometer, etc.	—	1	1
	Product environment subtotal		—	159	159
Workplace environment	Energy saving	Upgrading air-conditioning systems, installation of inverter-equipped systems, etc.	694	409	1,102
	Waste reduction	Maintaining zero emissions systems, waste reduction, etc.	—	59	59
	Reduction in use of hazardous chemical substances	Disposal and management of unnecessary chemical substances, etc.	—	4	4
	Green purchasing	Promoting purchase of eco-friendly materials, etc.	—	0	0
	Improvements to workplace	Improvement in workplace environmental performance, etc.	—	32	32
	Workplace environment subtotal		694	504	1,198
Legal compliance	Management of equipment for processing gaseous emissions and effluents, maintenance of noise/vibration-emitting facilities, waste management, recycling fee management, control of dangerous substances, etc.		290	865	1,154
Administration	ISO 14001 (administering Environmental Management System (EMS), workplace education), social contribution activities, planting trees, etc.		—	681	681
Grand total			983	2,209	3,193

### Cost of environmental protection classified according to guidelines of the Japanese Ministry of the Environment

Unit: millions of yen

	Category	Main activities	Investment	Expenses	Total	Economic effect
Costs within business establishment area			983	1,337	2,320	153
	Pollution prevention costs	Management of equipment for processing gaseous emissions and effluents, maintenance of noise/vibration-emitting facilities, etc.	283	425	708	—
	Global environment protection costs	Energy conservation, reduction in use of hazardous chemical substances, control of dangerous substances, etc.	700	487	1,187	91
	Resource recycling costs	Waste reduction, waste management, recycling fee management, maintenance of zero emissions systems, etc.	—	425	425	62
Upstream/downstream costs			—	12	12	—
Administration costs			—	470	470	—
R&D costs			—	147	147	—
Social activity costs			—	37	37	—
Environmental damage costs			—	206	206	—
Grand total			983	2,209	3,193	153

Scope of Data: Nikon Corporation, Tochigi Nikon, Tochigi Nikon Precision, Sendai Nikon, former Sendai Nikon Precision, Miyagi Nikon Precision, Kurobane Nikon, Hikari Glass, TNI Industry Nagai Factory, etc.

Applicable Period: April 1, 2009 to March 31, 2010

\* Costs which could not be clarified are in principle not included in these accounts.

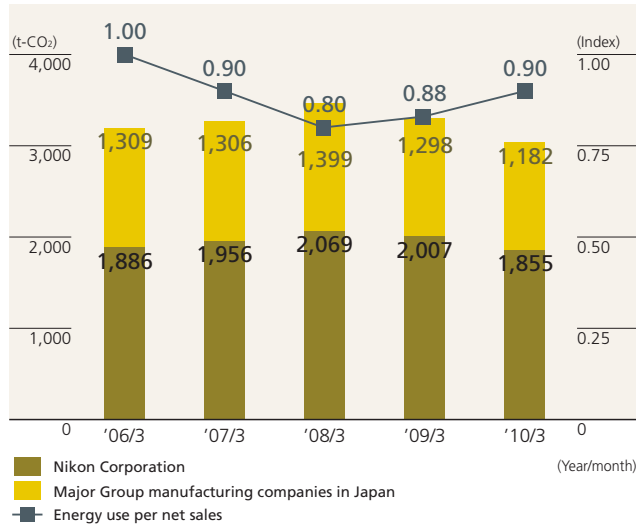
\* Depreciation and amortization have not been factored into these accounts.

\* Where a facility has been utilized for several purposes and breakdown is considered complex, the entire cost has been included in the investment cost.

\* All costs have been rounded up or down to the nearest whole number, so it is possible that totals are not identical to the sum of the constituents as listed.

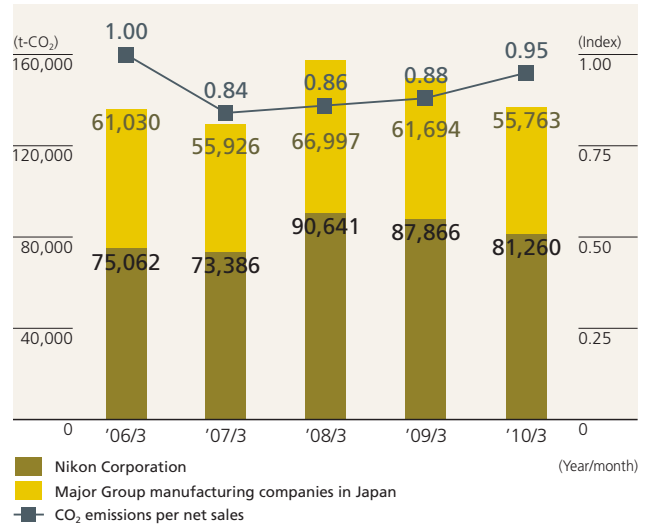
\* Only substantial effects deductible based on sound reasons are included as economic effects of environmental conservation measures.

### 2006–2010 Energy use [Nikon Group Companies in Japan]



\* The baseline year for calculating the energy use index per net sales is set as the year ended March 2006. (Year ended March 31, 2006 = 1)

### 2006–2010 CO<sub>2</sub> emissions [Nikon Group Companies in Japan]



\* CO<sub>2</sub> emissions indexes for the years ended March 2009 and March 2010 were calculated using the emission factor for the year ended March 2009.  
 \* The baseline year for calculating the CO<sub>2</sub> emissions index per net sales is set as the year ended March 2006. (Year ended March 31, 2006 = 1)

### PRTR survey results (year ended March 31, 2010)

Unit: kg

Facility	Substance no.	Substance name	Volume handled	Amount released			Amount transferred		Amount in on-site landfill	Amount removed for processing	Amount shipped in product	
				Air	Public water	Soil	Sewage	Waste				
Major Group manufacturing companies in Japan	Sendai Nikon*1	69	Hexavalent-chromium compounds	2,659	0	0	0	0	143	0	0	2,516
		227	Toluene	2,573	2,000	0	0	0	574	0	0	0
	Hikari Glass Akita Plant	243	Barium and its water-soluble compounds	3,942	3	0	0	0	1,545	0	0	2,394
		304	Boron and its compounds	30,968	43	2	0	0	12,160	0	0	18,763
TNI Industry Ohtawara Factory	144	Dichloropentafluoropropane	1,233	826	0	0	0	0	0	0	407	
<b>Total</b>			41,375	2,872	2	0	0	14,422	0	0	24,080	

\*1 Including former Sendai Nikon Precision  
 \* Nikon Corporation: No PRTR substances at Ohi, Yokohama, Sagami, Kumagaya and Mito Plants.  
 \* Major Group manufacturing companies in Japan: No PRTR substances at Tochigi Nikon, Tochigi Nikon Precision, former Mito Nikon Precision, Miyagi Nikon Precision, and Kurobane Nikon.  
 \* The above table includes data only for hazardous chemical substances of which one ton or more (0.5 tons or more for Class 1 designated chemical substances) is handled at the facility in a given year.  
 \* The volumes handled are not always identical to the sum of the constituents because of rounding.

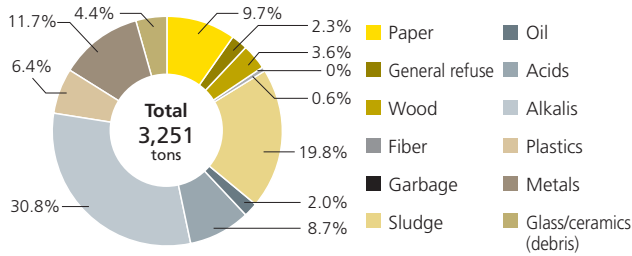
### Achievement of Zero Emissions Level 1 of Nikon Group

Company	System complete (year-end)
Nikon Corporation	All plants March 31, 2003 (completed)
Group manufacturing companies in Japan	Sendai Nikon*1 March 31, 2002 (completed)
	Tochigi Nikon*2 March 31, 2004 (completed)
	Kurobane Nikon March 31, 2004 (completed)
	Former Mito Nikon Precision March 31, 2005 (completed)
	Miyagi Nikon Precision (former Zao Nikon) March 31, 2005 (completed)
	TNI Industry Nagai Factory March 31, 2010 (completed)
Group manufacturing companies in Japan	Nasu Nikon March 31, 2006 (completed)
	Aichi Nikon March 31, 2007 (completed)

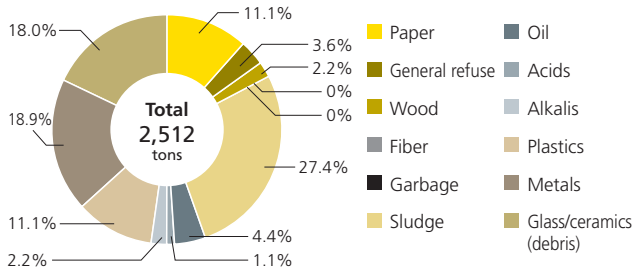
\*1 Including former Sendai Nikon Precision  
 \*2 Including Tochigi Nikon Precision

## Environmental Data

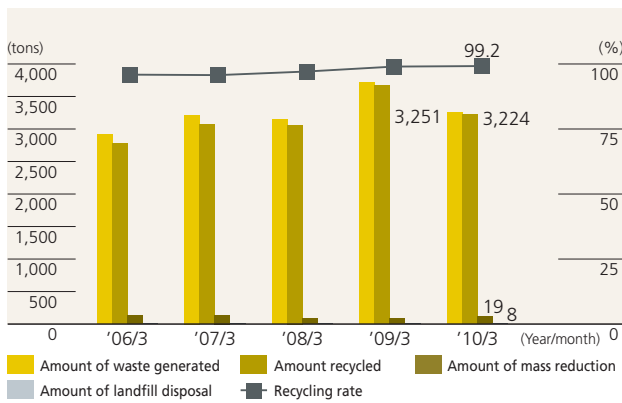
### Waste by category (in the year ended March 31, 2010) [Nikon's Plants]



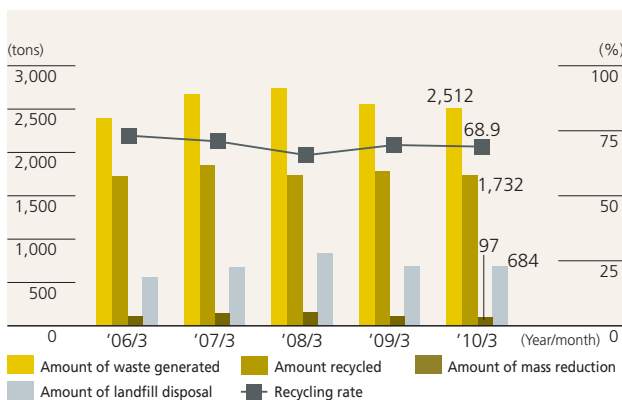
### Waste by category (in the year ended March 31, 2010) [Group manufacturing companies in Japan]



### Discharge, disposal, and recycling of waste [Nikon's Plants]



### Discharge, disposal, and recycling of waste [Group manufacturing companies in Japan]



### Air & Water Quality Environmental Data for Each Plant (Year ended March 31, 2010)

\* Where there is more than one figure indicated per item in the tables below, the plant has more than one facility.

#### Nikon Corporation Ohi Plant

Address: 6-3, Nishi-Ohi 1-chome,  
Shinagawa-ku, Tokyo  
140-8601, Japan  
Phone: +81-3-3773-1307



#### Air (Air Pollution Control Law, Metropolitan regulations)

Units: Dust: g/Nm<sup>3</sup>; NOx: ppm

Item	Regulatory standard	Plant standard	Actual (max.)	
Cooling & heating equipment	Dust	0.05	0.05	<0.001
		0.05	0.05	<0.001
		0.05	0.05	<0.001
Cooling & heating equipment	NOx	45	45	27
		45	45	28
		45	45	25

#### Water quality (Sewerage Law, Metropolitan regulations)

Unit: mg/liter, except for pH

Item	Regulatory standard	Plant standard	Actual (max.)	
Living environment	pH	5.8-8.6	5.9-8.5	6.5-7.3
	BOD	300	240	66.1
	SS	300	240	76
	n-Hexane (animal & vegetable)	30	24	10
	Iodine consumption	220	176	1
	Copper	3	2.4	<0.01
	Zinc	2	1.6	0.08
	Soluble iron	10	8	0.17
	Total chromium	2	1.6	0.03
	Fluorine	15	12	1.66
	Boron	230	184	0.1
	Nitrogen	120	96	14
	Phosphorus	16	12.8	3.2
Health	Lead	0.1	0.08	0.01
	Trichloroethylene*	0.3	0.24	<0.001
	Tetrachloroethylene*	0.1	0.08	<0.002
	1,1-Dichloroethylene*	0.2	0.16	<0.002
	cis-1,2-Dichloroethylene*	0.4	0.32	<0.004

\* From October 7, 2009, some wastewater monitoring items relating to the water quality of effluent were added to ensure ground water is of sufficient quality after the treatment of contaminated soil.

### Yokohama Plant

Address: 471 Nagaodai-cho,  
Sakae-ku, Yokohama,  
Kanagawa 244-8533,  
Japan  
Phone: +81-45-852-2111



### Sagamihara Plant

Address: 10-1, Asamizodai  
1-chome, Minami-ku,  
Sagamihara, Kanagawa  
252-0328, Japan  
Phone: +81-42-740-6300



#### Air (Air Pollution Control Law, Prefectural regulations)

Unit: NOx: ppm

Item	Regulatory standard	Plant standard	Actual (max.)	
Boiler	NOx	65	60	21
		65	60	23
		65	60	48
		46	42	30
		46	42	32
		46	42	29
		46	42	37
		46	42	22
		46	42	29

#### Air (Air Pollution Control Law, Prefectural regulations)

Units: Dust: g/Nm<sup>3</sup>; NOx: ppm; fluorine and lead: mg/Nm<sup>3</sup>; hydrogen chloride: ppm

Item	Regulatory standard	Plant standard	Actual (max.)	
Boiler	Dust	0.1	0.05	0.0037
		0.1	0.05	0.0039
		0.1	0.05	0.0044
		0.1	0.05	0.0042
		0.1	0.05	0.0039
		0.1	0.05	0.0060
	NOx	60	57	53
		60	57	56
		60	57	54
		105	100	11
		105	100	7
		60	57	29
Absorption chiller	Dust	0.1	0.05	<0.001
		0.1	0.05	<0.001
	NOx	60	57	32
60		57	32	
Fusion furnace*1	Dust	0.15	0.1	*2
	NOx	800	20	
	Boron	2.5	2	
Scrubber	Hydrogen chloride	5	4	1.8
		5	4	1.4

#### Water quality (Sewerage Law, City regulations)

Unit: mg/liter, except for pH

Item	Regulatory standard	Plant standard	Actual (max.)	
Living environment	pH	5.0-9.0	5.5-8.5	6.0-7.6
	BOD	600	540	3.6
	SS	600	540	24
	n-Hexane (mineral)	5	4.5	3
	Iodine consumption	220	200	0
	Total chromium	2	1	0.2
	Copper	1	0.9	0.2
	Zinc	1	0.9	0.2
	Soluble iron	3	2.7	0.2
	Soluble manganese	1	0.9	0.2
	Fluorine	8	7	3
	Boron	10	8	3
	Nitrogen	240	135	25.6
	Phosphorus	32	18	0.1
	Nickel	1	0.9	0.2
	Health	Lead	0.1	0.1
Hexavalent-chromium		0.5	0.4	0.05
Arsenic		0.1	0.1	0
Trichloroethylene		0.3	0.2	0
Tetrachloroethylene		0.1	0.1	0
Dichloromethane		0.2	0.1	0

\*1 Optical glass smelting furnace (classified as a fusion furnace under the Air Pollution Control Law)

\*2 No actual data for the year ended March 2010 was collected because the fusion furnace had not been in operation.

#### Water quality (Sewerage Law, City regulations)

Unit: mg/liter, except for pH

Item	Regulatory standard	Plant standard	Actual (max.)	
Living environment	pH	5.8-8.6	6.0-8.4	6.4-7.8
	BOD	300	60	28
	SS	300	90	86
	Zinc	2	0.5	0.07
	Fluorine	15	7.5	1.5
	Boron	230	3	0.68
	Ammonia and nitrate nitrogen	125	50	9.9
Health	Lead	0.1	0.08	<0.02
	Arsenic	0.1	0.05	<0.01

\*Actual data for pH, BOD, SS, and fluorine for the year ended March 2010 include those of Shonan branch.

## Environmental Data

### Kumagaya Plant

Address: 201-9 Miizugahara,  
Kumagaya, Saitama  
360-8559, Japan  
Phone: +81-48-533-2111



#### Air (Air Pollution Control Law, Prefectural regulations)

Units: Dust: g/Nm<sup>3</sup>; NOx: ppm

Item	Regulatory standard	Plant standard	Actual (max.)	Item	Regulatory standard	Plant standard	Actual (max.)
Boiler	Dust	0.05	*	NOx	150	120	25
					150	120	27
					150	120	28
					150	120	72
					150	120	31
					150	120	28
					150	120	31
					150	120	66
					150	120	73
					150	120	70
					150	120	26
					150	120	29
					150	120	75
					150	120	76
					150	120	57
					150	120	30
					150	120	29
					150	120	29
					150	120	75
					150	120	71
150	120	30					
150	120	24					
150	120	24					

\* In accordance with the Air Pollution Control Law, which stipulates that dust emitted from gas-fired boilers be measured once or more every five years, dust emissions were not measured in the year ended March 31, 2010. (The last measurement was made in the year ended March 31, 2008.)

#### Water quality (Sewerage Law, City regulations)

Unit: mg/liter, except for pH

Item	Regulatory standard	Plant standard	Actual (max.)
Living environment	pH	5.1-8.9	5.8-8.2
	BOD	600	480
	SS	600	480
	n-Hexane (mineral)	5	4
	n-Hexane (animal & vegetable)	30	24
	Iodine consumption	220	198
	Copper	3	2.4
	Zinc	2	1.6
	Soluble iron	10	8
	Nitrogen	240	192
	Phosphorus	32	26
Ammonia and nitrate nitrogen	380	304	
Health	Lead	0.1	0.08

### Mito Plant

Address: 276-6 Motoishikawa-cho, Mito, Ibaraki  
310-0843, Japan  
Phone: +81-29-240-1112



#### Air (Air Pollution Control Law)

Units: Dust: g/Nm<sup>3</sup>; NOx: ppm

Item	Regulatory standard	Plant standard	Actual (max.)	
Boiler*	Dust	0.1	0.05	<0.005
		0.1	0.05	<0.005
		0.1	0.05	<0.005
		0.1	0.05	<0.005
	NOx	150	120	87
		150	120	89
		150	120	85
		150	120	100

\* The fuel for the three existing boilers was switched from heavy oil to liquefied petroleum gas (LPG) on October 20, 2008. The newly installed boiler started operation on February 1, 2009, fueled by LPG.

#### Water quality (Water Pollution Control Law, City regulations)

Unit: mg/liter, except for pH and E. coli (colonies/ml)

Item	Regulatory standard	Plant standard	Actual (max.)
Living environment	pH	5.8-8.6	6.0-8.2
	BOD	20	20
	SS	30	30
	n-Hexane (animal & vegetable)	10	10
	Nitrogen	60	60
	Phosphorous	8	8
	E. coli (daily average)	3,000	2,700
	3		

### Tochigi Nikon Corporation

Address: 770 Midori, Otawara,  
Tochigi 324-8625, Japan  
Phone: +81-287-28-1111



### Tochigi Nikon Precision Co., Ltd.

Address: 760 Midori, Otawara,  
Tochigi 324-8520, Japan  
Phone: +81-287-28-1177

#### Air (Air Pollution Control Law)

Units: Dust: g/Nm<sup>3</sup>; NOx: ppm; SOx: Nm<sup>3</sup>/h

Item	Regulatory standard	Plant standard	Actual (max.)	
Boiler	Dust	0.3	0.2	<0.005
		0.3	0.2	<0.005
		0.3	0.2	<0.006
		0.3	0.2	<0.006
		0.3	0.2	<0.005
	NOx	180	120	99
		180	120	93

Item		Regulatory standard	Plant standard	Actual (max.)
Boiler	NOx	180	120	84
		180	120	87
		180	120	83
	SOx	14.5	0.5	0.3
		14.5	0.5	0.3
		14.5	0.5	<0.1
		14.5	0.5	<0.1

### Water quality (Water Pollution Control Law, Prefectural regulations, etc.)

Unit: mg/liter, except for pH and E. coli (colonies/ml)

Item		Regulatory standard	Plant standard	Actual (max.)
Living environment	pH	5.8-8.6	6.0-8.4	6.5-7.7
	BOD	20	6.3	3.6
	SS	40	5.5	3.2
	n-Hexane (mineral)	5	0.9	0.8
	Total chromium	2	0.2	<0.1
	Fluorine	0.8	0.7	0.4
	E. coli (daily average)	3,000	240	26
Health	Cadmium	0.1	0.01	<0.01
	Cyanogen	1	0.1	<0.1
	Lead	0.1	0.06	<0.01
	Hexavalent-chromium	0.5	0.05	<0.05
	Arsenic	0.1	0.05	<0.01
	Trichloroethylene	0.3	0.03	<0.001
	Tetrachloroethylene	0.1	0.01	<0.0005
	Dichloromethane	0.2	0.02	<0.02
1,1,1-Trichloroethane	3	0.3	<0.001	

### Sendai Nikon Corporation

Address: 277, Aza-hara, Tako, Natori, Miyagi 981-1221, Japan  
Phone: +81-22-384-0011

### Former Sendai Nikon Precision Co., Ltd.

Address: 289, Aza-hara, Tako, Natori, Miyagi 981-1221, Japan  
Phone: +81-22-384-0018



### Air (Air Pollution Control Law)

Units: Dust: g/Nm<sup>3</sup>; NOx: ppm

Item		Regulatory standard	Plant standard	Actual (max.)
Boiler	Dust	0.05	0.035	0.004
		0.05	0.035	0.008
		0.05	0.035	0.007
	NOx	600	100	43
		600	100	45
		600	100	42

### Water quality (Sewerage Law, City regulations)

Unit: mg/liter, except for pH

Item		Regulatory standard	Plant standard	Actual (max.)
Living environment	pH	5.8-8.6	6.0-7.8	7.1
	BOD	300	30	3.4
	SS	300	30	4.0
	n-Hexane (mineral)	5	3	1.0
	n-Hexane (animal & vegetable)	30		
	Iodine consumption	220	20	10.0
	Total chromium	2	1	0.5
	Copper	3	1	0.1
	Zinc	2	1	0.1
	Phenols	5	1	0.5
	Soluble iron	10	1	0.1
	Manganese	10	1	0.1
	Fluorine	15	1	0.5
	Boron	230	1	0.1
	Nitrogen	125	10	1.3
	Phosphorus	20	10	3.2
	Ammonium and nitrate nitrogen	380	10	1.0
Health	Cadmium	0.1	0.05	0.01
	Cyanogen	1	0.5	0.1
	Organophosphate	1	0.5	0.1
	Lead	0.1	0.05	0.01
	Hexavalent-chromium	0.5	0.1	0.05
	Arsenic	0.1	0.1	0.01
	Total mercury	0.005	0.002	0.0005
	Alkyl mercury	Not detectable	Not detectable	<0.0005
	PCB	0.003	0.001	0.0005
	Trichloroethylene	0.3	0.2	0.03
	Tetrachloroethylene	0.1	0.1	0.01
	Dichloromethane	0.2	0.1	0.02
	Carbon tetrachloride	0.02	0.01	0.002
	1,2-Dichloroethane	0.04	0.02	0.004
	1,1-Dichloroethylene	0.2	0.1	0.02
	cis-1,2-Dichloroethylene	0.4	0.2	0.04
	1,1,1-Trichloroethane	3	1	0.3
	1,1,2-Trichloroethane	0.06	0.02	0.006
	1,3-Dichloropropene	0.02	0.01	0.002
	Thiuram	0.06	0.02	0.006
Simazine	0.03	0.02	0.003	
Benthocarb	0.2	0.1	0.02	
Benzene	0.1	0.1	0.01	
Selenium	0.1	0.1	0.01	



## Environmental Data

### Miyagi Nikon Precision Co., Ltd. (Former Zao Nikon Co., Ltd.)

Address: 20, Aza-shin-oyoke,  
Miya, Zao-machi,  
Katta-gun, Miyagi  
989-0701, Japan  
Phone: +81-224-32-2336



#### Air (Air Pollution Control Law)

Units: Dust: g/Nm<sup>3</sup>; NOx: ppm

Item		Regulatory standard	Plant standard	Actual (max.)
No applicable facilities	Dust			
	NOx			

#### Water quality (Water Pollution Control Law, Prefectural regulations, etc.)

Unit: mg/liter, except for pH and E. coli (colonies/ml)

Item		Regulatory standard	Plant standard	Actual (max.)
Living environment	pH	5.8-8.6	5.8-8.6	6.8-7.7
	BOD	30	30	13
	SS	200	35	3.5
	n-Hexane (mineral)	5	2.5	0.7
	Copper	3	0.1	0.05
E. coli (daily average)		3,000	1,000	290
Health	Cadmium	0.1	0.01	<0.002
	Cyanogen	1	0.2	<0.1
	Organophosphate	1	0.2	<0.1
	Lead	0.1	0.02	<0.01
	PCB	0.003	0.001	<0.0005
	Trichloroethylene	0.3	0.01	<0.001
	Dichloromethane	0.2	0.08	<0.001
Benzene	0.1	0.01	<0.001	

### Kurobane Nikon Co., Ltd.

Address: 1434, Kurobanemuko-  
machi, Otawara,  
Tochigi 324-0241, Japan  
Phone: +81-287-53-1111



#### Air (Air Pollution Control Law)

Units: Dust: g/Nm<sup>3</sup>; NOx: ppm

Item		Regulatory standard	Plant standard	Actual (max.)
No applicable facilities	Dust			
	NOx			

#### Water quality (Water Pollution Control Law, Prefectural regulations)

Unit: mg/liter, except for pH

Item		Regulatory standard	Plant standard	Actual (max.)
Living environment	pH	5.0-9.0	6.5-8.0	6.7-7.8

Item		Regulatory standard	Plant standard	Actual (max.)
Living environment	BOD	600	5	8.6*
	SS	600	10	6.0
	n-Hexane (mineral)	5	1	<1.0
	Zinc	1	1	<0.1
	Fluorine	0.8	0.8	0.4
Boron		1	1	0.14
Health	Lead	0.1	0.05	<0.01
	Arsenic	0.5	0.5	<0.01
	Trichloroethylene	0.3	0.3	<0.003
	Tetrachloroethylene	0.1	0.1	<0.010
	Dichloromethane	0.2	0.03	<0.02

\* Occurred in January 2010 (The value exceeded the regulatory and plant standards.)

Cause: Due to renewal of an aeration tank for biological treatment, microbial density took time to recover to the sufficient value.

Measures: Microbial stimulants were introduced into the process, resulting in biological treatment being performed sufficiently.

### Hikari Glass Co., Ltd. Akita Plant

Address: 155, Aza-Mitsumata  
Shirahata, Komagata-  
cho, Yuzawa, Akita  
012-0104, Japan  
Phone: +81-183-42-2197



#### Air (Air Pollution Control Law)

Units: Dust: g/Nm<sup>3</sup>; NOx: ppm; fluorine, lead and hydrogen chloride: mg/Nm<sup>3</sup>

Item		Regulatory standard	Plant standard	Actual (max.)
Fusion furnace*	Dust	0.15	0.01	<0.01
	NOx	800	80	9
	Fluorine	10	10	0.65
	Lead	20	2	<0.56
	Hydrogen chloride	80	20	<5.9

\* Optical glass smelting furnace (classified as a fusion furnace under the Air Pollution Control Law)

#### Water quality (Water Pollution Control Law, Prefectural regulations, etc.)

Unit: mg/liter, except for pH

Item		Regulatory standard	Plant standard	Actual (max.)
Living environment	pH	5.8-8.6	5.8-8.6	6.4-7.9
	BOD	30	30	26.4
	SS	70	56	11
	n-Hexane (mineral)	5	4	4
	Copper	3	3	0.01
	Zinc	2	1.6	0.11
	Soluble iron	5	4	0.43
	Manganese	10	10	0.01
	Fluorine	8	8	3.5
	Boron	10	8	2.6
Health	Lead	0.08	0.08	<0.01
	Hexavalent-chromium	0.5	0.5	<0.05
	Arsenic	0.08	0.08	<0.01



### TNI Industry Nagai Factory

Address: 3011 Isazawa, Nagai,  
Yamagata 993-0021,  
Japan  
Phone: +81-238-84-1042



#### Air (Air Pollution Control Law)

Units: Dust: g/Nm<sup>3</sup>; NOx: ppm

Item		Regulatory standard	Plant standard	Actual (max.)
No applicable facilities	Dust			
	NOx			

#### Water quality (Water Pollution Control Law, Prefectural regulations)

Unit: mg/liter, except for pH

Item		Regulatory standard	Plant standard	Actual (max.)
Living environment	pH	5.8–8.6	6.0–8.4	3.9–7.5 <sup>*1</sup>
	BOD	25	22.5	52.0 <sup>*2</sup>
	SS	60	54	230.0 <sup>*3</sup>
	n-Hexane (animal & vegetable)	30	27	7
	Nitrogen	120	108	110.0 <sup>*4</sup>
	Phosphorus	16	14.4	8.8

- \*1 Occurred in November 2009 (The value exceeded the regulatory and plant standards.)  
Cause: Due to acidic-detergent inflow to a private sewerage system, pH became acidic.  
Measures: In order to avoid such inflow into a private sewerage system, a notice instructing workers not to use large amounts of acidic detergent was posted at general-use sinks.
- \*2 Occurred in January 2010 (The value exceeded the regulatory and plant standards.)  
Cause: Due to a large volume of wastewater inflow to a private sewerage system, wastewater treatment was not sufficiently performed, resulting in poor water quality.  
Measures: A notice instructing workers not to discharge a large volume of wastewater into a private sewerage system at one time was posted at general-use sinks.
- \*3 Occurred in November 2009 (The value exceeded the regulatory and plant standards.)  
Cause: Because the wastewater sample for analysis was collected from a measuring point with a low level of water, the sample was contaminated with tank sediments.  
Measures: All the workers involved in performing analyses were instructed to collect wastewater samples only when the water level is appropriate.
- \*4 Occurred in March 2010 (The value exceeded the regulatory and plant standards.)  
Cause: Due to a long interval between sludge removal operations, the quality of water in a private sewerage system became poor.  
Measures: The interval was shortened to maintain appropriate water quality.

### Water usage by plant (in the year ended March 31, 2010)

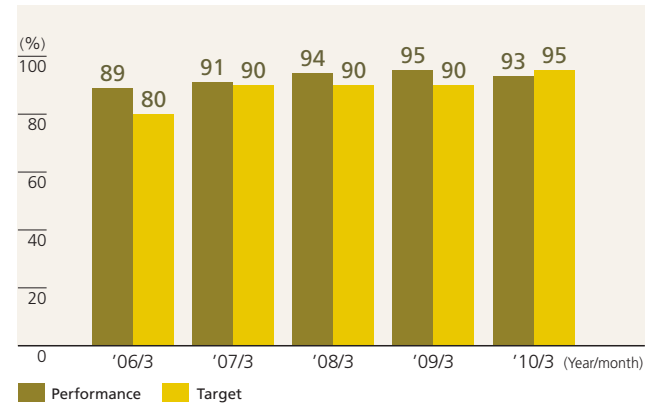
Unit: m<sup>3</sup>

Plant		Annual water usage
Nikon Corporation	Ohi Plant	46,122
	Yokohama Plant	66,387
	Sagamihara Plant	784,385
	Kumagaya Plant	349,288
	Mito Plant	18,222
Group manufacturing companies in Japan	Tochigi Nikon <sup>*1</sup>	492,732
	Former Mito Nikon Precision	2,555
	Sendai Nikon <sup>*2</sup>	115,880
	Miyagi Nikon Precision (former Zao Nikon)	25,567
	Kurobane Nikon	1,661
	Hikari Glass, Akita Plant	168,845
TNI Industry Nagai Factory		17,847
Total		2,089,491

\*1 Including Tochigi Nikon Precision

\*2 Including former Sendai Nikon Precision

### 2006–2010 Rate of green purchasing (purchases of specified goods as %) [Nikon Corporation]



### ■ B

#### **Biodiversity**

A state achieved through the link between all individual living creatures on this Earth

The Convention on Biological Diversity defines biological diversity as follows: "Biological diversity" means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

#### **BCM**

Business continuity management, a strategic management method for companies to respond promptly to a range of risks that might materialize with the occurrence of unexpected emergencies such as natural disasters or acts of terrorism. It is designed to help them continue their business even in the event of a major emergency.

#### **BCP**

Business continuity plan, a plan formulated by a company to show its policies and measures in the event of an emergency such as a natural disaster or accident, designed to ensure continuity of business and to allow ordinary business activities to be resumed with the limited managerial resources available in such an emergency

#### **BOD**

Biochemical oxygen demand, the amount of oxygen required for microorganisms to break down organic pollutants contained in water. Used as a pollutant indicator for rivers

### ■ C

#### **Corporate governance**

A system that allows companies to supervise and check the management of their business appropriately

#### **Compliance (with laws and regulations)**

Compliance provides the basis for CSR fulfillment. Companies are required to comply with laws, regulations, and rules and also to respond sincerely to requests from the society in which they operate.

#### **CSR**

Corporate social responsibility. Companies are expected to fulfill their corporate social responsibilities from environmental, economic, and social aspects on a voluntary basis to build trust with the society in which they operate. In the ISO 26000 draft international standard on social responsibility created by the International Organization for Standardization (ISO), CSR is defined as follows:

Responsibility of an organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behavior that

- contributes to sustainable development, including health and the welfare of society;
- takes into account the expectations of stakeholders;
- is in compliance with applicable law and consistent with international norms of behavior; and
- is integrated throughout the organization and practised in its relationships

Source: ISO/DIS 26000 Guidance on Social Responsibility, ISO

#### **CSR-oriented procurement**

In CSR-oriented procurement, companies expand their CSR activities to suppliers and check that in addition to quality, pricing, and deadlines, they are conducting corporate activities in consideration of the environment, human rights, and other issues. Companies show their procurement and purchasing criteria to their suppliers and ask them to comply with the criteria on a continual basis.

### ■ D

#### **Diversity**

Refers to companies having a diversity of employees and accepting that diversity. The Japan Business Federation's study group on diversity defines the term as follows:

Strategy to respond promptly and flexibly to changes in the business environment for the growth of the company and the happiness of individual employees by accepting a range of attributes (regarding gender, age, nationality, disabilities, etc.) as well as various values and ideas without bias from conventional corporate and social standards.

### ■ E

#### **Eco-glass**

The Nikon Group developed lead- and arsenic-free optical glass for use in the lenses and prisms of optical devices, and calls this type of glass "Eco-glass." The use rate of Eco-glass in optical systems has reached 100% in most Nikon products.

#### **Environmental accounting**

An accounting method used to clarify the costs spent in improving environmental performance

#### **Environmental Reporting Guidelines (2007)**

Published by the Japanese Ministry of the Environment to provide organizations creating and publishing environmental reports with practical guidance. The guidelines list the requisite reporting items and their details based on the latest domestic and international trends in environmental reporting.

#### **Energy efficiency**

The Nikon Group defines energy efficiency as the degree of functionality of each product per unit of power consumption.

Energy efficiency of a product = Degree of functionality/Unit of power consumption

Functionality is defined separately for each product type. The Nikon Group is always committed to releasing new products with higher energy efficiency.

### ■ F

#### **FTSE4Good**

An SRI index created and launched in 2001 by the FTSE Group, which creates and manages equity and bond indices based in London. Stocks to be included in the index are selected from the following three viewpoints: environmental and social aspects and human rights.

### ■ G

#### **GRI**

Global Reporting Initiative, an international organization established in 1997 with the aim of creating and spreading the use of international guidelines on sustainability reporting. Companies and NPOs from countries all over the world participate in this organization based in the Netherlands, which is also designated as a collaborating centre of the UN Environment Programme (UNEP).

#### **GRI Guidelines**

International guidelines on sustainability reporting by organizations. The guidelines, which encourage companies to report their corporate activities from the three aspects of economy, environment, and society, are referred to by a large number of organizations in creating CSR reports.

#### **GHG (Greenhouse gas)**

Atmospheric gases, such as carbon dioxide and methane, trap heat from the Sun in the Earth's atmosphere. Called greenhouse gases, they cause the Earth's surface heat up. Under the Kyoto Protocol, carbon dioxide, methane, nitrous oxide, HFCs, PFCs, and SF6 are defined as greenhouse gases, emissions of which should be reduced to prevent global warming.

#### **Green procurement/green purchasing**

Refers to the procurement of more environmentally friendly materials, parts, and products and gives preference to highly environmentally conscious suppliers. Purchasing of environmentally friendly office supplies is referred to as green purchasing.

## I

### Internal control

A mechanism to prevent illegal and unfair acts to ensure efficient and sound business management based on in-house control rules and systems

### Iodine consumption

Amount of iodine used in the oxidization of reducing agents (sulfides, etc.) by iodine in wastewater. It is an indicator for the amount of reducing substance in wastewater.

## IPCC

The Intergovernmental Panel on Climate Change was established jointly by the UN Environment Programme (UNEP) and the World Meteorological Organization (WMO) in November 1988 to provide a public forum for discussion of the global warming problem. The IPCC examines issues related to climate change including global warming based on existing research results and from a range of aspects, including scientific findings, effects, countermeasures, and an assessments of the socioeconomic impact of the issue. The panel collects and publicly discloses technological findings and information to provide the driving force for progress in international action.

## ISO

The International Organization for Standardization, a non-governmental organization that formulates international standards based in Geneva, Switzerland

### ISO 9001

An international standard for quality management systems set by the ISO. Systems that meet ISO 9001 are certified by qualified certification bodies. The ISO 9000 series targets systems established by organizations for quality maintenance and management.

### ISO 14001

An international standard for environmental management systems set by the ISO. Systems that meet ISO 14001 are certified by qualified certification bodies. The ISO 14000 series is designed to help organizations manage their environmental impact.

### ISO 26000

A draft international standard on corporate social responsibility formulated by the ISO. The standard provides guidance on the social responsibility criteria that can be applied to any organization, but is not designed for certification by third parties.

## J

### JBRC

The Japan Portable Rechargeable Battery Recycling Center, an incorporated association that promotes the recycling of small rechargeable batteries based on the Act on the Promotion of Effective Utilization of Resources.

## K

### Kurumin

The name of the Next-Generation Childcare Support Certification Mark. The Japanese Ministry of Health, Labour and Welfare approves the use of this mark by companies and corporations that meet the predefined criteria for proactively engaging in childcare support.

## L

### LCA

Life cycle assessment, an objective method to quantitatively evaluate the environmental impact of products and services throughout their lifecycles, including the exploitation of resources and the manufacture, use, disposal, and transportation of the products

## N

### n-Hexane (minerals or plants and animals)

Normal hexane extracts, which do not vaporize at temperatures around 100°C, provide an indicator of the content of oil, hydrocarbon, and other substances in wastewater. Specifically, these extracts include animal/vegetable fats and oils, fatty acids, petroleum-based hydrocarbons, wax, and grease.

### NOx

Nitrogen oxide, one of the substances that cause air pollution and acid rain

## O

### Ozone-depleting substances

Substances that cause depletion of the ozone layer, and especially those regulated under the Montreal Protocol, are often referred to as ozone-depleting substances. In Japan, substances regulated under the Act on the Protection of the Ozone Layer are deemed to be ozone-depleting substances. These substances include organochlorine compounds such as specified CFCs (11, 12, 113, 114, and 115), other CFCs (such as CFC 13), trichloroethane, and carbon tetrachloride, and organobromine compounds such as specified halons (1211, 1301, and 2402).

## P

### pH

Hydrogen ion concentration index, shows whether a water sample is acidic, neutral or alkaline (pH=7: neutral, pH<7: acidic, and pH>7: alkaline). If the pH value differs by 1, the hydrogen ion concentration will differ by 10 times.

### ppm

Part(s) per million, a unit of concentration

### PRTR

The "Pollutant Release and Transfer Register" system is a system used by governments to collect, tabulate, and disclose data on chemical substances that might have harmful effects on human health and ecosystems. They are identified and reported to governments once per year by companies.

### Principles for Responsible Investment

This initiative for socially responsible investment was proposed to investor groups by former UN Secretary-General Kofi Annan. It comprises six principles that are intended to promote the incorporation of environmental, social, and corporate governance (ESG) issues in the decision-making process for investment. This initiative is fostered through the UN Environment Programme (UNEP) and the UN Global Compact.

## R

### REACH regulation

A regulation on chemical substances issued by the European Union (EU) in 2007. "REACH" stands for the "Registration, Evaluation, Authorization, and restriction of CHemicals," and manufacturers and importers of chemical substances are mandated to register information on the safety and use of these substances under the regulation.

### Risk management

Provides a method to minimize the impact and damage that might be caused by various risks by reducing or preventing the materialization of these risks

### RoHS Directive

"RoHS" stands for "Restriction of Hazardous Substances." This directive was adopted by the EU in 2003. It restricts the use of certain hazardous chemical substances in electrical and electronic equipment with a view to minimizing the risks that these substances pose to the environment and human health.

### S

#### SAICM

The Strategic Approach to International Chemicals Management, an international agreement on the management of chemical substances made to achieve the target of the Johannesburg Plan of Implementation, which aims to achieve the following: that by 2020 chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment.

#### Stakeholders

For a company, the term stakeholder refers to all the people and organizations with whom it has a relationship. Specifically, stakeholders include customers, shareholders, investors, employees, business partners, and local communities.

#### Supply chain

The flow of products and services to consumers, including the procurement of materials and the manufacture, sale, and transportation of products.

#### Sustainability

For an organization, sustainability refers to the ability to develop itself over generations in a sustainable manner from environmental, social, and economic aspects. The goal of “sustainable development” is to “meet the needs of the present without compromising the ability of future generations to meet their own needs.”

Source: World Commission on Environment and Development, Our Common Future, Oxford University Press

#### SO<sub>x</sub>

Sulfur oxide, one of the air pollutants that cause photochemical smog and acid rain.

#### SRI

Socially responsible investment, investing in companies that have been evaluated not only on their business performance, profitability, growth potential, and other financial data, but also on CSR-related aspects such as their social, ethical, and environmental commitments.

#### SS

Suspended solids, matter suspended in water, such as small particular matter, zooplankton, phytoplankton, whole or parts of carcasses, organic matter such as excrement, inorganic components of sand and mud, and various artificial pollutants.

### U

#### UN Global Compact

Proposed by then UN Secretary-General Kofi Annan at the World Economic Forum held in Davos in 1999 and officially launched at UN Headquarters in New York in 2000. The Global Compact comprises 10 principles on human rights, labor standards, the environment, and anti-corruption. Companies joining this initiative are required to comply with and implement the 10 principles.

### W

#### WEEE Directive

This directive, which mandates manufacturers to recover and recycle “Waste Electrical and Electronic Equipment” in and after August 2005, was enacted by the EU.

#### WWF

The World Wide Fund for Nature, an international nature conservation NPO established in Switzerland in 1961. This fund is implementing a range of nature conservation projects and anti-global warming measures across the globe.

### Z

#### Zero emissions

A concept proposed by the United Nations University in 1994 with a view to reducing waste from the whole of society to zero by recycling waste from one industry for use as resources for other industries.

