Oppama Plant / Environmental Report 2004

Business Summary: Vehicle manufacturing

Location: 1 Natsushimacho, Yokosuka-shi, Kanagawa, Japan

Start of Operations: October 1961

Number of Employees: 4,700

ISO 14001 Certification: May 1997

Environmental Slogan: Let's preserve and improve the natural environment of our beautiful beaches with their green flora and blue seas.

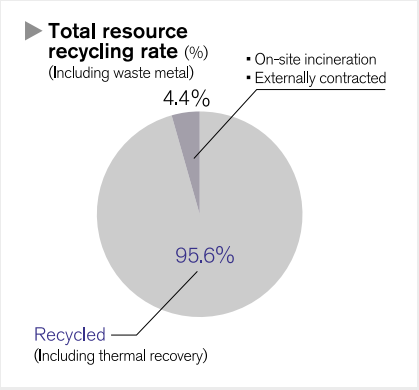
General Manager
Oppama Plant
Yoshiaki Watanabe

Oppama Plant

Major Results in FY 2003

Zero Emissions

While maintaining zero direct disposal to landfill volume, we are working to reduce our volume of incinerated waste through such activities as waste separation and recycling.



Energy Conservation

Superior Energy Control Plant
(Electrical Engineering Section)

Commendation from the Director General of the Agency for Natural Resources and Energy

Because of the combined efforts of each and every one of our employees, we were recognized with this award for the results of our energy conservation activities. In particular, we were commended for 1) shutting down the electric transformer on days the plant is not in operation and 2) shutting down compressed air lines on holidays and at night.

Energy Recovery from Automobile Shredder Dust (ASR)

In preparation for the enforcement of the Automobile Recycling Law in January 2005, we are incinerating ASR in the waste incinerator at our plant and performing energy recovery.

Reduction of Substances with an Environmental Impact

The deodorization equipment that treats emissions from the paint plant oven was changed from a catalytic converter to a regenerative thermal oxidizer (RTO), leading to an improvement in the volatile organic compound (VOC) removal rate.

FY 2003 Objectives and Results

Objective	Target	Results	Comments
Environmental preventive measures	Zero environmental accidents	+	Implemented environmental education, environmental patrols, and training for responding to accidents according to plan.
Reduction in substances with an environmental impact	100% implementation of facilities improvement plan	+	Installed the RTO in the paint according to plan.
	Cleaning thinner recovery rate of more than 60%	+	Maintained our target for the recovery rate of cleaning thinner.
Energy conservation	Reduction in amount of heat 82,000 GJ/year	+	Reached our target for discovering and implementing energy conservation activities.
Zero emission of waste	Reduction in amount of incinerated waste	+	Discovered and implemented new recycling activities; waste separation patrols have been implemented as scheduled.
Creating a corporate culture that values the environment	Implementation of events to raise environmental awareness	+	Conducted events for Environmental Month, Energy Conservation Month, and other events
Cooperation and coexistence with local communities	• Implementation of mutual observation tours with other companies • Implementation of cleanup activities • Invitation to visitors for environmental course of plant tour	+	In addition, we held a Plant Open House and set up an environmental information corner.

*Environmental Accident: A spill above legal requirements leaving company grounds

Communication with the Community

Oppama Plant Open House

Citizens from the local community took a tour of the inside of our plant.

Attendees: 1300 **Event Date:** Monday, November 3, 2003
Location: Oppama Plant Areas 1 and 2

2003 Oppama Festival

We held the "Oppama Autumn Festival" with the aim to establish a harmonious relationship with the local community and to invigorate our employees.

Participants: 27,000 **Event Date:** Sunday, September 13, 2003
Location: Oppama Plant Area 3

Nissan Cup Oppama Championship (Wheelchair Half-Marathon)

Event Date: Sunday, July 13, 2003
Location: Oppama Plant Areas 1,2 and 3

NISSAN CUP Kanagawa Triathlon

Event Date: Sunday, June 22, 2003
Location: Provided Oppama Plant Area 3 and the Test Course for meeting areas

Environmental Data

Air Quality (Air Pollution Control Law and ordinances)

Unit: NOx: ppm, Soot and dust: g/m³ N, Dioxins: ng-TEQ/m³ N

Substance	Facilities	Legal Limits	Measured Value
NOx	Boilers	105	64
	Heating furnaces	130	30
	Incinerators	250	100
Soot and dust	Boilers	0.1	0.004
	Heating furnaces	0.1	0.001
	Incinerators	0.1	0.029
Dioxins	Incinerators	1	0.75

Measured values are the maximum measured values in FY 2003

Wastewater Quality (Waste Water Pollution Control Law and other ordinances)

Unit: mg/L (except pH)

Item	Legal Limits	Measured Values		
		Maximum	Minimum	Average
pH	5.8~8.6	7.4	7.0	7.2
COD	60	9.9	6.0	8.4
COD (total)	110	37.7	11.1	20.7
BOD	60	ND	ND	ND
SS	90	1.0	ND	0.08
Oil	5	ND	ND	ND
Zinc	3	0.41	0.07	0.18
Fluoride	15	2.3	1.1	1.63
Copper	3	0.05	ND	0.02
Cyanogens	1	ND	ND	ND
Nickel	1	0.2	ND	0.03
Soluble manganese	1	0.10	ND	0.05
Total nitrogen	50	32	10	15.6
Total phosphorous	16	0.4	ND	1

▪ Measurements of items other than those listed above were below minimum quantifiable limits ▪ ND indicated values lower than the minimum quantifiable limit

PRTR Substances

Unit: kg/year (Dioxins: ng-TEQ/year)

Substance number	Chemical substance	Amount handled	Air	Water	Waste	Landfilled by Nissan	Recycled	Chemically changed	Product
1	Water-soluble zinc compounds	35,102	0	105	0	4,458	0	0	30,539
9	Bis (2-ethylhexyl)apidate	3,479	0	0	0	0	0	348	3,131
30	Bisphenol A mold epoxy resin	1,156	0	0	0	0	0	228	928
40	Ethyl benzene	33,307	2,900	0	0	0	0	5,026	25,381
43	Ethylene glycol	811,421	0	0	0	0	0	0	811,421
63	Xylene	1,400,941	536,712	0	0	0	722,503	109,783	31,943
68	Chromium and trivalent chromium compounds	4	0	0	0	0	0	0	4
176	Organotin compounds	8,849	0	88	0	0	0	8,761	0
224	1,3,5 trimethylbenzene	94	61	0	0	0	0	33	0
227	Toluene	603,888	202,532	0	0	0	103,127	107,880	190,349
230	Lead and its compounds	44	0	0	0	10	0	0	34
231	Nickel	5	0	0	0	0	0	0	5
232	Nickel compounds	5,181	0	137	0	3,085	0	0	1,959
243	Barium and its compounds	1	0	0	0	0	0	0	1
270	Di-n-Butyl Phthalate	10	9	0	0	0	0	1	0
272	Bis (2-ethylhexyl) phthalate	181,602	0	0	0	0	0	5,457	176,145
299	Benzene	17,832	9	0	0	0	0	5,085	12,738
307	Poly (oxyethylene) = alkyl ether (C =12 -15)	458	0	0	0	0	0	458	0
309	Poly (oxyethylene) nonyl phenyl ether	6,111	0	122	0	0	0	5,989	0
311	Manganese and its compounds	11,859	0	487	0	3,929	0	0	7,443
312	Phthalic anhydride	134	0	0	0	0	0	13	121
179	Dioxins	5,735	136	0	5,239	0	0	0	0
	Total	**3,121,469**	**742,223**	**939**	**0**	**11,473**	**825,630**	**249,062**	**1,292,142**

▪ PRTR : Pollution Release and Transfer Register. This system calculates the extent to which the production, use, and storage of chemical substances result in the release and transfer of those substances into the environment. The PRTR Law was originally enacted in July 1999 in Japan. ▪ According to PRTR law, raw materials that contain 0.1% or more of carcinogen (designated type 1 chemical substances) and those that contain 1% or more of other substances are measured. All are reported to the local government, but information on additional substances is included in this chart (all types of dioxin are stated). ▪ As the figures are rounded to the first place, the sum of air, water, waste, or buried by Nissan, recycled, chemically changed, and made into products may not necessarily be the same as the sum of the amount handled or total.

Major products

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