

Cosmo Matsuyama Oil Co., Ltd.

Address: 3-580 Okaga, Matsuyama-shi, Ehime-ken

Start of operations: February 1944

Area: 532,879 m²

Employees: 119

Business activities: Production and sales of fuel oils, petroleum products, petrol solvents and liquefied gases

(as of March 2002)

Regulated Pollutants

Air Pollutants	Pollutant	Regulation	Type of control	Standard	Performance	
					Maximum	Average
	NOx (m ³ /hour)				14.79	11.63
	SOx (m ³ /hour)	Pollution control agreement	Areawide total pollutant load control	208	56.34	45.16
	Particulate (boiler) (g/m ³)	Pollution control agreement	Concentration control	0.17	0.06	0.03

Water Pollutants	Pollutant	Regulation	Type of control	Standard	Performance	
					Maximum	Average
	COD (kg/hour)	Note 1	Areawide total pollutant load control	363.3	35.7	6.8
	COD (mg/L)	Prefectural ordinance	Concentration control	16 (10)	3.9	3.4
	SS (mg/L)	Prefectural ordinance	Concentration control	20	3	3
	Oil content (mg/L)	Prefectural ordinance	Concentration control	2	Below measurement threshold	
	Nitrogen (mg/L)	Water Pollution Control Law	Concentration control	120 (60)	1.10	0.66
	Phosphorus (mg/L)	Water Pollution Control Law	Concentration control	16 (8)	0.21	0.15
	Phenol (mg/L)	Prefectural ordinance	Concentration control	0.3	Below measurement threshold	

Note 1: Law for Special Measures for the Conservation of the Seto Inland Sea

Figures in parentheses = daily average

Environmental Performance

	Amount
Energy	57,181 (L-crude oil/year)
CO ₂	151,481 (t-CO ₂ /year)
SOx	981 (t/year)
NOx	187 (t/year)
COD	2.4 (t/year)
Industrial wastes generated	316 (t/year)
Industrial wastes recycled	115 (t/year)
Industrial wastes disposed of	96 (t/year)

PRTR Law designated chemical substance	Release/transfer
Ethyl benzene (atmospheric release)	4.3 (t/year)
Xylene (atmospheric release)	23.0 (t/year)
1,3,5-trimethylbenzene (atmospheric release)	3.5 (kg/year)
Toluene (atmospheric release)	47.0 (t/year)
Benzene (atmospheric release)	8.1 (t/year)

Environmental Accounting

Item	Environmental cost (million yen)	
	Investment amount	Expenditure amount
1 Business area costs	1	24
Pollution prevention costs	1	17
Global environmental conservation costs	0	0
Resource circulation costs	0	7
2 Upstream/downstream costs	3	490
Product environmental impact reduction costs	3	490
Product sulfur reduction costs	0	0
Gasoline	0	0
Naphtha	0	0
Jet fuel oil	0	0
Kerosene	0	0
Diesel fuel	0	0
Heavy fuel oil A	0	0
Heavy fuel oil C	0	0
LPG	0	0
Costs of substituting toxic substances in gasoline	2	375
Costs of aromatics reduction in petrochemical products	1	115
Green procurement costs	0	0
3 Management activity costs	0	40
4 Research and development costs	0	0
5 Social activity costs	0	51
Total	4	605

Item	Benefits of environmental protection	
	Reduction of environmental impacts (2000 value minus 2001 value)	
	Environmental impacts	
1 Business area benefits		
Benefits of reduction in resource input		
Energy input	85	(TJ)
Water input	(31)	(thousand t)
Benefits of reduction in emissions and waste generation		
Release to atmosphere	(thousand t-CO ₂)	
CO ₂	6	(t)
SOx	24	(t)
NOx	14	(t)
Benzene	0	(t)
Release to water	(t)	
COD	0.1	(t)
Wastes	(t)	
Industrial wastes generated	157	(t)
Industrial wastes recycled	67	(t)
Industrial wastes disposed of	40	(t)
2 Upstream/downstream benefits		
Benefits of product environmental impact reduction		
Product sulfur reduction	(potential SOx emissions: t)	
Total	-48	(t)
Gasoline	0	(t)
Naphtha	0	(t)
Jet fuel oil	-53	(t)
Kerosene	-3	(t)
Diesel fuel	-2	(t)
Heavy fuel oil A	10	(t)
Heavy fuel oil C	0	(t)
LPG	0	(t)
Benefits of substituting toxic substances in gasoline	(t)	
Benefits of aromatics reduction in petrochemical products	27	(t)
CO ₂ emissions from product use	-1,736	(thousand t-CO ₂)
	-146	(thousand t-CO ₂)