

Refineries ①

Hokkaido Refinery

25-1 Masago-cho, Tomakomai-city, Hokkaido 059-1392

Section	Indicator	Unit	FY2009	FY2010	FY2011	FY2012	FY2013
	Crude oil throuput	thousand kiloliter	6,019	5,950	6,606	6,121	6,856
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	468	471	521	479	536
	Unit energy consumption	liter of crude oil equivalent/kiloliter	8.14	8.60	8.03	8.19	8.22
Air pollution	SOx	tonnes	2,108	2,209	2,578	3,193	3,417
	NOx	tonnes	1,145	1,159	1,202	1,112	1,194
	Soot/dust	tonnes	10.6	12.5	15.0	15.1	14.8
	Benzene	tonnes	1.2	1.2	1.4	1.2	1.5
Water source	Service water	thousand tonnes	9,599	9,853	9,985	9,743	10,140
	Seawater	thousand tonnes	124,322	137,655	125,758	130,573	144,415
Water pollution	Wastewater	thousand tonnes	133,921	147,508	135,743	140,316	154,555
	COD	tonnes	27.4	27.0	30.9	24.0	35.0
	Total Nitrogen	tonnes					
	Total Phosphorus	tonnes					
Waste	Emitted	tonnes	14,481	13,908	12,598	12,047	13,072
	Reduced by intermediate treatment	tonnes	3,058	663	744	1,002	699
	Recycled	tonnes	11,394	13,240	11,848	11,038	12,366
	Final disposal	tonnes	29	5	6	7	7

※The tabulation period for SOx is January -December 2014.

<PRTR-listed chemical substrates discharged and transferred in FY2013>

CAS No.	Substance name	unit: tonnes					total
		Discharged into air	Discharged into water	Discharged into soil	Transferred to locations outside		
100-41-4	ethylbenzene	0.3	0.0	0.0	0.0	0.3	
1330-20-7	xylene	1.2	0.0	0.0	0.0	1.2	
127-18-4	tetrachloroethylene	0.0	0.0	0.0	4.4	4.4	
95-63-6	1,2,4-trimethylbenzene	0.1	0.0	0.0	0.0	0.1	
108-88-3	toluene	3.9	0.0	0.0	0.0	3.9	
110-54-3	n-hexane	19.0	0.0	0.0	0.0	19.0	
71-43-2	benzene	1.5	0.0	0.0	0.0	1.5	
	Total PRTR-listed chemical substances	26.0	0.0	0.0	4.4	30.4	



Note : Chemicals are not listed if the discharged and transferred amounts are less than 0.1 tons.
 Figures indicated in graphs and tables within this report are rounded off and therefore may not exactly match the totals shown.

Refineries ②

Chiba Refinery

2-1 Anesakikaigan, Ichihara-city, Chiba 299-01922

Section	Indicator	Unit	FY2009	FY2010	FY2011	FY2012	FY2013
	Crude oil throughput	thousand kiloliter	9,524	10,345	9,168	10,032	9,168
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	780	861	767	844	794
	Unit energy consumption	liter of crude oil equivalent/kiloliter	8.74	8.51	8.94	8.99	9.00
Air pollution	SOx	tonnes	1,708	2,111	1,628	2,195	1,932
	NOx	tonnes	1,469	1,635	1,205	1,397	1,309
	Soot/dust	tonnes	51.6	174.8	88.6	111.2	95.5
	Benzene	tonnes	0.7	0.5	0.8	0.5	0.7
Water source	Service water	thousand tonnes	18,250	18,534	17,449	18,558	18,689
	Seawater	thousand tonnes	299,801	329,205	295,669	334,516	307,927
Water pollution	Wastewater	thousand tonnes	318,051	347,739	313,118	353,074	326,616
	COD	tonnes	21.2	23.2	25.1	26.2	29.6
	Total Nitrogen	tonnes	46.9	51.4	52.8	58.0	66.4
	Total Phosphorus	tonnes	0.1	0.1	0.1	0.2	0.2
Waste	Emitted	tonnes	84,134	83,808	88,210	87,549	84,296
	Reduced by intermediate treatment	tonnes	29,262	26,891	29,983	26,688	28,140
	Recycled	tonnes	54,835	56,910	58,200	60,851	56,147
	Final disposal	tonnes	37	7	27	10	9

※The tabulation period for SOx is January -December 2014.

<PRTR-listed chemical substrates discharged and transferred in FY2013 >

CAS No.	Substance name	unit: tonnes					total
		Discharged into air	Discharged into water	Discharged into soil	Transferred to locations outside		
141-43-5	2-aminoethanol	0.0	0.0	0.0	1.3	1.3	
1332-21-4	asbestos	0.0	0.0	0.0	1.6	1.6	
100-41-4	ethylbenzene	0.1	0.0	0.0	0.0	0.1	
1330-20-7	xylene	0.4	0.0	0.0	0.0	0.4	
95-63-6	1,2,4-trimethylbenzene	0.1	0.0	0.0	0.0	0.1	
108-88-3	toluene	2.6	0.0	0.0	0.0	2.6	
112-02-7	hexadecyltrimethylammonium chloride	0.0	9.4	0.0	0.0	9.4	
110-54-3	n-hexane	7.7	0.0	0.0	0.0	7.7	
71-43-2	benzene	0.7	0.0	0.0	0.0	0.7	
	Total PRTR-listed chemical substances	11.5	9.4	0.0	2.9	23.8	



Note : Chemicals are not listed if the discharged and transferred amounts are less than 0.1 tons.
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Refineries ③

Aichi Refinery

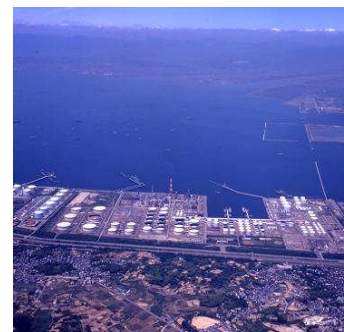
11 Minamihama-machi, Chita-city, Aichi 478-8555

Section	Indicator	Unit	FY2009	FY2010	FY2011	FY2012	FY2013
	Crude oil throuput	thousand kiloliter	7,011	7,213	7,440	7,974	6,978
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	610	654	665	665	613
	Unit energy consumption	liter of crude oil equivalent/kiloliter	9.12	8.82	8.89	8.65	8.75
Air pollution	SOx	tonnes	992	1,385	1,095	900	792
	NOx	tonnes	1,182	1,296	1,259	1,283	1,179
	Soot/dust	tonnes	32.2	46.0	42.1	51.6	40.6
	Benzene	tonnes	0.9	1.6	1.8	1.0	0.9
Water source	Service water	thousand tonnes	12,602	12,530	12,582	12,567	12,495
	Seawater	thousand tonnes	187,534	214,318	227,061	240,107	213,855
Water pollution	Wastewater	thousand tonnes	200,136	226,848	239,643	252,674	226,350
	COD	tonnes	8.9	8.1	9.4	8.9	8.5
	Total Nitrogen	tonnes	7.7	6.9	6.1	6.5	5.5
	Total Phosphorus	tonnes	1.2	1.1	1.1	0.6	0.5
Waste	Emitted	tonnes	97,741	77,420	84,353	86,610	90,320
	Reduced by intermediate treatment	tonnes	59,267	41,244	41,692	47,588	49,544
	Recycled	tonnes	38,369	36,172	42,630	39,001	40,729
	Final disposal	tonnes	105	5	31	21	47

※The tabulation period for SOx is January -December 2014.

<PRTR-listed chemical substrates discharged and transferred in FY2013>

CAS No.	Substance name	unit : tonnes					total
		Discharged into air	Discharged into water	Discharged into soil	Transferred to locations outside		
1332-21-4	asbestos	0.0	0.0	0.0	1.3	1.3	
100-41-4	ethylbenzene	0.1	0.0	0.0	0.0	0.1	
1330-20-7	xylene	0.4	0.0	0.0	0.0	0.4	
95-63-6	1,2,4-trimethylbenzene	0.0	0.0	0.0	0.0	0.0	
108-88-3	toluene	1.4	0.0	0.0	0.0	1.4	
110-54-3	n-hexane	5.8	0.0	0.0	0.0	5.8	
71-43-2	benzene	0.9	0.0	0.0	0.0	0.9	
	Total PRTR-listed chemical substances	8.7	0.0	0.0	1.3	10.0	



Note : Chemicals are not listed if the discharged and transferred amounts are less than 0.1 tons.
 Figures indicated in graphs and tables within this report are rounded off and therefore may not exactly match the totals shown.

Refineries ④

Tokuyama Refinery

1-1 Shingu-cho, Shunan-city, Yamaguchi 745-8613

Section	Indicator	Unit	FY2009	FY2010	FY2011	FY2012	FY2013
	Crude oil throughput	thousand kiloliter	5,917	5,417	6,116	5,029	5,537
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	428	403	428	363	405
	Unit energy consumption	liter of crude oil equivalent/kiloliter	9.96	10.43	9.92	10.49	9.97
Air pollution	SOx	tonnes	215	181	222	191	207
	NOx	tonnes	655	605	596	492	567
	Soot/dust	tonnes	11.6	14.1	27.2	16.2	18.3
	Benzene	tonnes	0.5	0.4	0.5	0.4	0.4
Water source	Service water	thousand tonnes	3,134	3,227	4,787	4,418	4,631
	Seawater	thousand tonnes	217,509	205,728	200,973	176,655	208,747
Water pollution	Wastewater	thousand tonnes	220,643	208,955	205,760	181,073	213,378
	COD	tonnes	14.1	15.6	13.4	13.0	13.8
	Total Nitrogen	tonnes	10.0	9.2	7.7	7.3	8.9
	Total Phosphorus	tonnes	0.3	0.3	0.2	0.2	0.3
Waste	Emitted	tonnes	4,680	3,636	3,501	4,220	3,491
	Reduced by intermediate treatment	tonnes	2,222	1,130	1,176	1,343	812
	Recycled	tonnes	2,348	2,465	2,297	2,843	2,664
	Final disposal	tonnes	110	41	28	34	15

※The tabulation period for SOx is January -December 2014.

<PRTR-listed chemical substrates discharged and transferred in FY2013>

CAS No.	Substance name	unit: tonnes					total
		Discharged into air	Discharged into water	Discharged into soil	Transferred to locations outside		
141-43-5	2-aminoethanol	0.0	0.0	0.0	3.6	3.6	
1330-20-7	xylene	1.4	0.0	0.0	0.0	1.4	
68-12-2	N,N-dimethylformamide	0.0	0.0	0.0	12.0	12.0	
95-63-6	1,2,4-trimethylbenzene	0.2	0.0	0.0	0.0	0.2	
108-88-3	toluene	3.7	0.0	0.0	0.0	3.7	
110-54-3	n-hexane	6.9	0.0	0.0	0.0	6.9	
71-43-2	benzene	0.4	0.0	0.0	0.0	0.4	
1336-36-3	polychlorinated biphenyls; PCBs	0.0	0.0	0.0	2.0	2.0	
	Total PRTR-listed chemical substances	12.6	0.0	0.0	17.6	30.2	



Note : Chemicals are not listed if the discharged and transferred amounts are less than 0.1 tons.
 Figures indicated in graphs and tables within this report are rounded off and therefore may not exactly match the totals shown.

Petrochemical Plants ①

Chiba Plant

2-1 Anesakikaigan, Ichihara-city, Chiba 299-01922

Prime Polymer Co., Ltd.'s Anesaki Works is included.

Section	Indicator	Unit	FY2009	FY2010	FY2011	FY2012	FY2013
Production of ethylene equivalent		thousand tonnes	2,102	2,112	1,877	1,934	2,061
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	658	643	583	634	637
	Unit energy consumption	kiloliter of crude oil equivalent/tonnes	0.313	0.305	0.311	0.328	0.309
Air pollution	SOx	tonnes	6.0	7.7	11.2	18.8	17.2
	NOx	tonnes	887	967	962	1,058	1,019
	Soot/dust	tonnes	5.8	5.2	12.3	6.5	13.4
Water source	Service water	thousand tonnes	4,269	4,140	3,962	3,777	3,631
	Seawater	thousand tonnes	124,970	123,432	105,500	114,107	117,173
Water pollution	Wastewater	thousand tonnes	127,111	125,492	107,655	116,126	118,933
	COD	tonnes	10.9	9.7	9.5	8.5	8.0
	Total Nitrogen	tonnes	15.8	15.9	15.5	12.9	13.0
	Total Phosphorus	tonnes	0.4	0.4	0.3	0.2	0.2
Waste	Emitted	tonnes	15,473	16,283	11,933	12,423	10,528
	Reduced by intermediate treatment	tonnes	3,927	3,350	747	116	937
	Recycled	tonnes	11,533	12,917	11,176	12,303	9,582
	Final disposal	tonnes	13	16	10	4	9

※The tabulation period for SOx is January -December 2014.

<PRTR-listed chemical substrates discharged and transferred in FY2013>

CAS No.	Substance name	unit: tonnes					total
		Discharged into air	Discharged into water	Discharged into soil	Transferred to locations outside		
141-43-5	2-aminoethanol	0.0	3.5	0.0	38.0	41.5	
80-05-7	4,4'-isopropylidenediphenol; bisphenol A	0.0	0.0	0.0	3.1	3.1	
100-41-4	ethylbenzene	7.9	0.0	0.0	1.9	9.8	
1330-20-7	xylene	2.0	0.0	0.0	0.0	2.0	
75-45-6	chlorodifluoromethane; HCFC-22	11.0	0.0	0.0	0.0	11.0	
75-09-2	dichloromethane; methylene dichloride	94.0	0.1	0.0	54.0	148.1	
100-42-5	styrene	9.0	0.0	0.0	0.5	9.5	
95-63-6	1,2,4-trimethylbenzene	0.5	0.0	0.0	0.0	0.5	
108-67-8	1,3,5-trimethylbenzene	0.2	0.0	0.0	0.0	0.2	
108-88-3	toluene	0.4	0.0	0.0	0.0	0.5	
108-95-2	phenol	0.3	0.0	0.0	3.6	3.9	
110-54-3	n-hexane	53.0	0.0	0.0	0.0	53.0	
71-43-2	benzene	3.1	0.0	0.0	0.0	3.1	
Total PRTR-listed chemical substances		181.4	3.6	0.0	101.2	286.1	



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Petrochemical Plants ②

Tokuyama Plant

1-1 Miyamae-cho, Shunan-city, Yamaguchi 745-8613

Gray Valley Idemitsu Corporation is included.

Section	Indicator	Unit	FY2009	FY2010	FY2011	FY2012	FY2013
Production of ethylene equivalent		thousand tonnes	1,911	1,731	1,628	1,329	1,629
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	698	674	625	525	630
	Unit energy consumption	kiloliter of crude oil equivalent/tonnes	0.365	0.390	0.384	0.395	0.382
Air pollution	SOx	tonnes	1,098	1,160	1,234	1,013	1,025
	NOx	tonnes	1,448	1,384	1,340	1,110	1,337
	Soot/dust	tonnes	8.5	18.7	8.3	9.5	9.2
Water source	Service water	thousand tonnes	13,494	12,161	10,878	10,840	13,159
	Seawater	thousand tonnes	301,097	298,578	292,517	251,234	289,706
Water pollution	Wastewater	thousand tonnes	314,591	310,740	303,395	265,074	302,865
	COD	tonnes	15.6	13.9	14.0	9.9	10.2
	Total Nitrogen	tonnes	17.7	14.0	12.7	12.6	11.2
	Total Phosphorus	tonnes	0.4	0.3	0.2	0.3	0.2
Waste	Emitted	tonnes	27,765	28,718	30,721	23,850	25,985
	Reduced by intermediate treatment	tonnes	11,951	12,398	15,401	12,333	12,388
	Recycled	tonnes	15,787	16,289	15,294	11,498	13,561
	Final disposal	tonnes	27	32	26	19	36

※The tabulation period for SOx is January -December 2014.

<PRTR-listed chemical substrates discharged and transferred in FY2013 >

CAS No.	Substance name	Discharged into air	Discharged into water	Discharged into soil	unit: tonnes	
					Transferred to locations outside	total
100-41-4	ethylbenzene	1.5	0.0	0.0	0.0	1.5
1330-20-7	xylene	1.1	0.0	0.0	0.0	1.1
77-73-6	dicyclopentadiene	0.1	0.0	0.0	0.0	0.1
100-42-5	styrene	11.0	0.0	0.0	0.0	11.0
95-63-6	1,2,4-trimethylbenzene	0.2	0.0	0.0	0.0	0.2
108-67-8	1,3,5-trimethylbenzene	0.1	0.0	0.0	0.0	0.1
108-88-3	toluene	4.0	0.0	0.0	0.0	4.0
91-20-3	naphthalene	0.1	0.0	0.0	0.0	0.1
106-99-0	1,3-butadiene	0.1	0.0	0.0	0.0	0.1
110-54-3	n-hexane	0.4	0.0	0.0	0.0	0.4
71-43-2	benzene	0.5	0.0	0.0	0.0	0.5
1336-36-3	polychlorinated biphenyls; PCBs	0.0	0.0	0.0	3.8	3.8
	Total PRTR-listed chemical substances	19.0	0.0	0.0	3.8	22.8



Note : Chemicals are not listed if the discharged and transferred amounts are less than 0.1 tons.
 Figures indicated in graphs and tables within this report are rounded off and therefore may not exactly match the totals shown.