

Refineries ①

Hokkaido Refinery

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

Section	Indicator	Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Crude oil throughput		thousand kiloliter	6,606	6,121	6,856	7,305	8,183
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	521	479	536	530	572
	Unit energy consumption	liter of crude oil equivalent/kiloliter	8.03	8.19	8.22	8.08	7.90
	CO ₂	thousand tonnes	868	829	921	888	959
Air pollution	SOx	tonnes	2,578	3,193	3,417	3,735	3,312
	NOx	tonnes	1,202	1,112	1,194	1,203	1,338
	Soot/dust	tonnes	15.0	15.1	14.8	8.7	6.1
	Benzene	tonnes	1.4	1.2	1.5	1.4	1.6
Water source	Service water	thousand tonnes	9,985	9,743	10,140	10,033	10,872
	Seawater	thousand tonnes	125,758	130,573	144,415	121,982	116,731
Water pollution	Wastewater	thousand tonnes	135,743	140,316	154,555	132,015	127,603
	COD	tonnes	30.9	24.0	35.0	27.3	33.2
	Total Nitrogen	tonnes					
	Total Phosphorus	tonnes					
Waste	Emitted	tonnes	12,598	12,047	13,072	11,969	9,612
	Reduced by intermediate treatment	tonnes	744	1,002	699	1,419	900
	Recycled	tonnes	11,848	11,038	12,366	10,536	8,709
	Final disposal	tonnes	6	7	7	14	3

※The tabulation period for SOx is January -December .

<PRTR-listed chemical substances discharged and transferred in FY2015>

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	3.2	3.2	
108-88-3	toluene	4.2	0.0	0.0	0.0	4.2	
110-54-3	n-hexane	20.0	0.0	0.0	0.0	20.0	
71-43-2	benzene	1.6	0.0	0.0	0.0	1.6	
	Total PRTR-listed chemical substances	27.3	0.0	0.0	3.2	30.5	



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 299-0192

Section	Indicator	Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Crude oil throughput		thousand kiloliter	9,168	10,032	9,168	10,936	9,678
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	767	844	794	873	791
	Unit energy consumption	liter of crude oil equivalent/kiloliter	8.94	8.99	9.00	8.64	8.79
	CO ₂	thousand tonnes	1,744	1,898	1,809	1,825	1,687
Air pollution	SOx	tonnes	1,628	2,195	1,932	2,151	1,975
	NOx	tonnes	1,205	1,397	1,309	1,480	1,158
	Soot/dust	tonnes	88.6	111.2	95.5	154.7	149.3
	Benzene	tonnes	0.8	0.5	0.7	0.8	0.8
Water source	Service water	thousand tonnes	17,449	18,558	18,689	19,034	18,494
	Seawater	thousand tonnes	295,669	334,516	307,927	327,124	297,475
Water pollution	Wastewater	thousand tonnes	313,118	353,074	326,616	346,158	315,969
	COD	tonnes	25.1	26.2	29.6	27.1	27.8
	Total Nitrogen	tonnes	52.8	58.0	66.4	70.7	53.8
	Total Phosphorus	tonnes	0.1	0.2	0.2	0.3	0.2
Waste	Emitted	tonnes	88,210	87,549	84,296	89,546	94,070
	Reduced by intermediate treatment	tonnes	29,983	26,688	28,140	25,937	22,986
	Recycled	tonnes	58,200	60,851	56,147	63,597	71,076
	Final disposal	tonnes	27	10	9	12	8

※The tabulation period for SOx is January -December .

<PRTR-listed chemical substances discharged and transferred in FY2015 >

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	1.8	1.8	
1332-21-4	asbestos	0.0	0.0	0.0	2.2	2.2	
1330-20-7	xylene	0.3	0.0	0.0	0.0	0.3	
95-63-6	1,2,4-trimethylbenzene	0.2	0.0	0.0	0.0	0.2	
108-88-3	toluene	7.3	0.0	0.0	0.0	7.3	
112-02-7	hexadecyltrimethylammonium chloride	0.0	8.0	0.0	0.0	8.0	
110-54-3	n-hexane	9.8	0.0	0.0	0.0	9.8	
71-43-2	benzene	0.8	0.0	0.0	0.0	0.8	
	Total PRTR-listed chemical substances	18.4	8.0	0.0	4.0	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 ③

Aichi Refinery

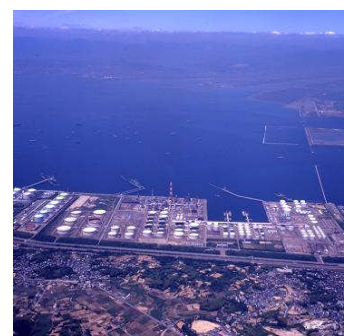
11 Minamihama-machi, Chita-city, Aichi 478-8555

Section	Indicator	Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Crude oil throughput		thousand kiloliter	7,440	7,974	6,978	8,825	8,899
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	665	665	613	681	685
	Unit energy consumption	liter of crude oil equivalent/kiloliter	8.89	8.65	8.75	8.24	8.31
	CO ₂	thousand tonnes	1,279	1,271	1,221	1,301	1,299
Air pollution	SO _x	tonnes	1,095	900	792	955	867
	NO _x	tonnes	1,259	1,283	1,179	1,302	1,308
	Soot/dust	tonnes	42.1	51.6	40.6	47.7	53.9
	Benzene	tonnes	1.8	1.0	0.9	1.5	1.5
Water source	Service water	thousand tonnes	12,582	12,567	12,495	12,474	12,339
	Seawater	thousand tonnes	227,061	240,107	213,855	233,581	228,914
Water pollution	Wastewater	thousand tonnes	239,643	252,674	226,350	246,055	241,253
	COD	tonnes	9.4	8.9	8.5	8.7	7.6
	Total Nitrogen	tonnes	6.1	6.5	5.5	6.9	5.7
	Total Phosphorus	tonnes	1.1	0.6	0.5	0.7	0.5
Waste	Emitted	tonnes	84,353	86,610	90,320	93,486	95,850
	Reduced by intermediate treatment	tonnes	41,692	47,588	49,544	52,365	53,997
	Recycled	tonnes	42,630	39,001	40,729	41,099	41,835
	Final disposal	tonnes	31	21	47	22	18

※The tabulation period for SO_x is January -December .

<PRTR-listed chemical substances discharged and transferred in FY2015 >

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	2.0	2.0	
100-41-4	ethylbenzene	0.2	0.0	0.0	0.0	0.2	
1330-20-7	xylene	1.8	0.0	0.0	0.0	1.8	
108-88-3	toluene	3.3	0.0	0.0	0.0	3.3	
110-54-3	n-hexane	12.0	0.0	0.0	0.0	12.0	
71-43-2	benzene	1.5	0.0	0.0	0.0	1.5	
	Total PRTR-listed chemical substances	19.3	0.0	0.0	2.0	21.3	



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

Former Tokuyama Refinery 1-1 Shingu-cho, Shunan-city, Yamaguchi 745-8613

At the end of fiscal 2013, Idemitsu terminated the crude oil refining function of the Tokuyama Refinery and renamed the facility the Tokuyama Complex. Accordingly, the facility's environmental performance data in fiscal 2014 is presented as part of data for the Tokuyama Complex.

Section	Indicator	Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Crude oil throughput		thousand kiloliter	6,116	5,029	5,537	-	-
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	428	363	405	-	-
	Unit energy consumption	liter of crude oil equivalent/kiloliter	9.92	10.49	9.97	-	-
	CO ₂	thousand tonnes	752	656	712	-	-
Air pollution	SO _x	tonnes	222	191	207	-	-
	NO _x	tonnes	596	492	567	-	-
	Soot/dust	tonnes	27.2	16.2	18.3	-	-
	Benzene	tonnes	0.5	0.4	0.4	-	-
Water source	Service water	thousand tonnes	4,787	4,418	4,631	-	-
	Seawater	thousand tonnes	200,973	176,655	208,747	-	-
Water pollution	Wastewater	thousand tonnes	205,760	181,073	213,378	-	-
	COD	tonnes	13.4	13.0	13.8	-	-
	Total Nitrogen	tonnes	7.7	7.3	8.9	-	-
	Total Phosphorus	tonnes	0.2	0.2	0.3	-	-
Waste	Emitted	tonnes	3,501	4,220	3,491	-	-
	Reduced by intermediate treatment	tonnes	1,176	1,343	812	-	-
	Recycled	tonnes	2,297	2,843	2,664	-	-
	Final disposal	tonnes	28	34	15	-	-

※The tabulation period for SO_x is January -December.



Petrochemical Plant

Chiba Plant

1-1 Anesakikaigan, Ichihara-city, Chiba 299-0193

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

Section	Indicator	Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Production of ethylene equivalent		thousand tonnes	1,877	1,934	2,061	1,938	1,876
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	583	634	637	628	598
	Unit energy consumption	kiloliter of crude oil equivalent/tonnes	0.311	0.328	0.309	0.324	0.319
	CO ₂	thousand tonnes	1,234	1,332	1,328	1,317	1,252
Air pollution	SO _x	tonnes	11.2	18.8	17.2	16.4	14.3
	NO _x	tonnes	962	1,058	1,019	955	843
	Soot/dust	tonnes	12.3	6.5	13.4	7.7	17.5
Water source	Service water	thousand tonnes	3,962	3,777	3,631	3,462	3,300
	Seawater	thousand tonnes	105,500	114,107	117,173	127,202	113,898
Water pollution	Wastewater	thousand tonnes	107,655	116,126	118,933	128,709	115,315
	COD	tonnes	9.5	8.5	8.0	8.1	8.0
	Total Nitrogen	tonnes	15.5	12.9	13.0	10.2	10.7
	Total Phosphorus	tonnes	0.3	0.2	0.2	0.1	0.1
Waste	Emitted	tonnes	11,933	12,423	10,528	11,679	13,518
	Reduced by intermediate treatment	tonnes	747	116	937	716	770
	Recycled	tonnes	11,176	12,303	9,582	10,960	12,726
	Final disposal	tonnes	10	4	9	3	22

※The tabulation period for SO_x is January -December .

<PRTR-listed chemical substances discharged and transferred in FY2015 >

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	1.4	0.0	34.0	35.4	
80-05-7	4,4'-isopropylidenediphenol; bisphenol A	0.0	0.0	0.0	72.0	72.0	
100-41-4	ethylbenzene	4.3	0.0	0.0	2.6	6.9	
1330-20-7	xylene	1.9	0.0	0.0	0.0	1.9	
75-45-6	chlorodifluoromethane; HCFC-22	5.0	0.0	0.0	0.0	5.0	
75-09-2	dichloromethane; methylene dichloride	64.0	0.0	0.0	720.0	784.0	
100-42-5	styrene	8.5	0.0	0.0	0.7	9.2	
95-63-6	1,2,4-trimethylbenzene	0.6	0.0	0.0	0.0	0.6	
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	0.4	
108-95-2	phenol	0.3	0.0	0.0	0.4	0.8	
110-54-3	n-hexane	0.0	0.0	0.0	0.0	0.0	
71-43-2	benzene	2.6	0.0	0.0	0.0	2.6	
	Total PRTR-listed chemical substances	87.8	1.4	0.0	829.7	918.9	

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.



Complex

Tokuyama Complex

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

Cray Valley Idemitsu Corporation is included.

At the end of fiscal 2013, Idemitsu terminated the crude oil refining function of the Tokuyama Refinery and renamed the facility the Tokuyama Complex.

Section	Indicator	Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Production of ethylene equivalent		thousand tonnes	1,628	1,329	1,629	1,464	1,901
Prevention of global warming	Total energy consumption	thousand kiloliter of crude oil equivalent	625	525	630	759	909
	Unit energy consumption	kiloliter of crude oil equivalent/tonnes	0.384	0.395	0.382	0.518	0.478
	CO ₂	thousand tonnes	1,402	1,187	1,416	1,680	1,981
Air pollution	SOx	tonnes	1,234	0	1,025	1,109	936
	NOx	tonnes	1,340	1,110	1,337	1,446	1,800
	Soot/dust	tonnes	8.3	9.5	9.2	12.4	16.0
Water source	Service water	thousand tonnes	10,878	10,840	13,159	14,918	15,521
	Seawater	thousand tonnes	292,517	251,234	289,706	389,337	448,850
Water pollution	Wastewater	thousand tonnes	303,395	265,074	302,865	404,255	464,371
	COD	tonnes	14.0	9.9	10.2	14.6	16.9
	Total Nitrogen	tonnes	12.7	12.6	11.2	12.0	11.2
	Total Phosphorus	tonnes	0.2	0.3	0.2	0.4	0.3
Waste	Emitted	tonnes	30,721	23,850	25,985	27,181	30,791
	Reduced by intermediate treatment	tonnes	15,401	12,333	12,388	14,586	19,666
	Recycled	tonnes	15,294	11,498	13,561	12,570	11,092
	Final disposal	tonnes	26	19	36	25	33

Notes:

1. Environmental performance data in fiscal 2013 and before represents data from the former Tokuyama Petrochemical Plant.
2. The tabulation period for SOx is January – December.

<PRTR-listed chemical substances discharged and transferred in FY2015 >

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	3.5	3.5	
100-41-4	ethylbenzene	1.5	0.0	0.0	0.0	1.5	
1330-20-7	xylene	3.1	0.0	0.0	0.0	3.1	
77-73-6	dicyclopentadiene	0.4	0.0	0.0	0.0	0.4	
68-12-02	N,N-dimethylformamide	0.0	0.0	0.0	11.0	11.0	
100-42-5	styrene	12.0	0.0	0.0	0.0	12.0	
95-63-6	1,2,4-trimethylbenzene	0.3	0.0	0.0	0.1	0.4	
108-88-3	toluene	5.9	0.0	0.0	0.0	5.9	
110-54-3	n-hexane	4.7	0.0	0.0	0.0	4.7	
71-43-2	benzene	1.6	0.0	0.0	0.0	1.6	
1336-36-3	polychlorinated biphenyls; PCBs	0.0	0.0	0.0	3.8	3.8	
	Total PRTR-listed chemical substances	29.5	0.0	0.0	18.4	48.0	



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.