

# Petrochemical Industrial Park Sewage System Effluent Standards

Nine articles promulgated by Environmental Protection Administration Order Huan-Shu-Shui-Tzu No. 1000103856 on December 1, 2011.

## Article 1

These Standards are determined pursuant to Article 7, Paragraph 2 of the Water Pollution Control Act.

## Article 2

Terms used in these Standards are defined as follows:

- I. "Seven-day average values" are derived by mixing four daily water samples, taken at intervals of from four to eight hours, to perform one water sample test; the average is then taken of test values for seven consecutive days.
- II. "Newly established petrochemical industrial parks" means those industrial parks for which planning had not been completed as of December 31, 2011, or for which planning had been completed, but project bid request procedures had not yet been completed as of that time.
- III. "Existing petrochemical industrial parks" means industrial parks that had been completed, were in construction, or for which project bid request procedures had been completed as of December 1, 2011.

## Article 3

These standards are applicable to industrial park sewage systems when the connected water volume approved on petrochemical and chemical industry permits exceeds 50% of the permit-approved effluent volume. Regulations in Article 2 of the Effluent Standards governing non-petrochemical industrial parks shall be applicable when the approved connected water volume does not exceed 50% of the permit-approved effluent volume.

## Article 4

See the attached table for the water quality items and limits prescribed in these Standards.

## Article 5

Petrochemical industrial park sewage systems or relevant environmental groups may submit detailed, scientific data or information at any time for review and revision reference.

## Article 6

The COD limits determined in these Standards shall be tested using the potassium dichromate oxidation method; the true color shall be tested using true color colorimetry.

## Article 7

Concerning the limits in the foregoing paragraph, apart from the pH, which is defined as a range and not in units, the rest are defined as the maximum allowed value using the following units of measure:

- I. Water temperature: Celsius (°C)
- II. True color: Unitless
- III. Other items: milligrams per liter (mg/L)

## Article 8

With regard to the limits for the items in these Standards, apart from water temperature and pH, these standards shall not apply when a petrochemical industrial park sewage system obtains water from a water body for non-contact cooling or circulating cooling and such water is discharged to the surface water body from which it was originally obtained.

## Article 9

Unless an enforcement date is separately designated, these standards shall take effect on the date of promulgation.

## Attached Table

Item	Limit	Remarks
Water temperature	38°C (applicable to the period from May to September)	Applicable to the discharging of effluents into surface water bodies other than the ocean:
	35°C (applicable to the period from October to April of the following year)	Applicable to the discharging of effluents into surface water bodies other than the ocean:
	42°C, and the temperature of the water at the discharge point may not exceed the temperature of the surface water 500 meters from the discharge point by more than 4°C.	Applicable to effluents directly discharged into the ocean.
pH	6.0 - 9.0	
Nitrate nitrogen	50	
Ammonia	20	Applicable to newly established petrochemical industrial parks.
	150	Applicable to existing petrochemical industrial parks from December 31, 2014.
	60	Applicable to existing petroleum and chemical industry areas, and Effective from July 1, 2016.
Phenols	1.0	
Anionic surfactants	10	
Cyanide	1.0	
Oil and grease (n-hexane extract)	10	
Soluble iron	10	
Soluble manganese	10	
Cadmium	0.03	

Lead		1.0	
Total chromium		2.0	
Hexavalent chromium		0.5	
Methylmercury		not detectable	
Total mercury		0.005	
Copper		3.0	
Zinc		5.0	
Silver		0.5	
Nickel		1.0	
Selenium		0.5	
Arsenic		0.5	
Boron		1.0	
Sulfides		1.0	
True color		550	
Biological oxygen demand (BOD)	Maximum value	30	
	Seven-day average value	25	
Chemical oxygen demand (COD)	Maximum value	100	
	Seven-day average value	80	
	Maximum value	90	Applicable to industrial areas with permit-approved effluent volume exceeding 10,000 CMD, and industrial parks for which planning had been completed by July 31, 2009 but project bid requests had not yet been made, or for which planning had not yet been completed.
	Seven-day average value	70	

			Effective from January 1, 2016.
Suspended solids	Maximum value	30	
	Seven-day average value	25	
	Maximum value	25	Applicable to industrial areas with permit-approved effluent volume exceeding 10,000 CMD, and industrial parks for which planning had been completed by July 31, 2009 but project bid requests had not yet been made, or for which planning had not yet been completed. Effective from January 1, 2016.
	Seven-day average value	20	
Benzene	0.05	Enforced from July 1, 2007.	
Ethylbenzene	0.4		
Dichloromethane	0.2		
Chloroform	0.6		
1,2-Dichloroethane	0.10		
Chloroethene	0.10		
Dimethyl phthalate (DMP)	0.2		
Diethyl phthalate (DEP)	0.4		
Dibutyl phthalate (DBP)	0.4		
Benzyl butyl phthalate (BBP)	0.4		
Di-n-octyl phthalate (DNOP)	0.6		
Di(2-ethylhexyl) phthalate (DEHP)	0.2		