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DENR Administrative Order  
No. 2016 -08

MAY 24 2016

**SUBJECT: Water Quality Guidelines and General Effluent Standards of 2016**

Pursuant to Section 19e and 19f of Republic Act (RA) 9275, otherwise known as the Philippine Clean Water Act of 2004, and Executive Order 192 (Providing the Reorganization of the Department of Environment, Energy and Natural Resources; Renaming it as the Department of Environment and Natural Resources) dated 10 June 1987, the Department of Environment and Natural Resources (DENR) hereby adopts and promulgates these Water Quality Guidelines (WQG) and General Effluent Standards (GES).

**SECTION 1.0 Basic Policy.** It is the policy of the State to pursue a policy of economic growth in a manner consistent with the protection, preservation and revival of the quality of our fresh, brackish and marine waters.

**SECTION 2.0 Objectives.** This Administrative Order is issued to provide guidelines for the classification of water bodies in the country; determination of time trends and the evaluation of stages of deterioration/enhancement in water quality; evaluation of the need for taking actions in preventing, controlling, or abating water pollution; and designation of water quality management areas (WQMA). In addition, this Order is issued to set the General Effluent Standards (GES).

**SECTION 3.0 Scope and Coverage.** The WQG applies to all water bodies in the country: freshwaters, marine waters, and groundwater; and shall be used for classifying water bodies, determining time trends, evaluating stages of deterioration or enhancement in water quality, and as basis for taking positive actions in preventing, controlling, or abating water pollution. Moreover, this WQG shall be used in the process of designating WQMA.

The GES applies to all point sources of pollution, regardless of volume, that discharge to receiving body of water or land. The GES shall be used regardless of the industry category.

**SECTION 4.0 Definition of Terms.** For purposes of this Order, the following terms shall have the following meanings:

- a) **"Annual Average"** means the sum of all values in one year divided by the number of values.

- b) **"Assimilative Capacity"** refers to the amount of contaminant load that can be discharged to a specific water body without exceeding the water quality guidelines.
- c) **"Discharge"** includes, but is not limited to, the act of spilling, leaking, pumping, pouring, emitting, emptying, releasing or dumping of any material into a water body or onto land from which it might flow or drain into said water.
- d) **"Effluent"** means discharges from known source, which is passed into a body of water or land, or wastewater flowing out of a manufacturing plant, industrial plant including domestic, commercial, and recreational facilities.
- e) **"Establishment"** refers to a recognizable economic unit under a single ownership or control, i.e., under a single legal entity, which engages in one or predominantly one kind of economic activity at a single physical location. This includes industrial, commercial, and institutional establishments.
- f) **"Freshwater"** means water containing less than 500 parts per million dissolved common salt, sodium chloride, such as that in groundwater, rivers, ponds and lakes.
- g) **"General Effluent Standards (GES)"** means any legal restriction or limitation on quantities, rates, and/or concentrations or any combination thereof, of physical, chemical or biological parameters of effluent which a person or point source is allowed to discharge into a body of water or land; that is applicable to all industry categories and defined according to the classification of the receiving water body.
- h) **"Geometric Mean"** is the  $n^{\text{th}}$  root of the product of a series of  $n$  numbers. It is a calculation to determine an average when the set of numbers covers a wide range.
- i) **"Groundwater"** refers to subsurface water that occurs beneath a water table in soils and rocks, or in geological formations.
- j) **"Industry"** means the set of all production units engaged primarily in the same or similar kinds of productive economic activity.
- k) **"Marine Waters"** refer to waters with salinity levels not less than 30 parts per thousand, at least 95 percent of the time.
- l) **"Maximum Allowable Limit"** are values that should not be exceeded at any point in time.
- m) **"Natural Background Concentration"** refers to the amount of naturally occurring chemical substances derived/originating from natural processes in the environment.
- n) **"Navigable Waters"** means the waters of the Philippines, including the territorial sea and inland waters suitable for water transport.
- o) **"Point Source"** means any identifiable source of pollution with specific point of discharge into a particular water body".
- p) **"Pollutant"** refer to any substance, whether solid, liquid, gaseous or radioactive, which directly or indirectly:
  - (i) alters the quality of any segment of the receiving water body so as to affect or tend to affect adversely any beneficial use thereof;
  - (ii) is hazardous or potentially hazardous to health;
  - (iii) imparts objectionable odor, temperature change, or physical, chemical

or biological change to any segment of the water body; or  
(iv) is in excess of the allowable limits or concentrations or quality standards specified, or in contravention of the condition, limitation or restriction prescribed in RA 9275.

- q) **"Potable Water"** means water suitable (both health and acceptability considerations) for drinking and cooking purposes.
- r) **"Primary Contact Recreation"** refers to any form of recreation, where there is intimate contact of the human body with water, such as swimming, water skiing, or skin diving.
- s) **"Primary Parameters"** are the required minimum water quality parameters to be monitored for each water body.
- t) **"Protected Water"** refers to a watercourse or a water body, or any segment thereof, that is classified as a source of public water supply, harvesting of shellfish for direct human consumption, or that which is designated by competent a government authority or by legislation as a national marine park and reserve, including coral reef park and reserve.
- u) **"Receiving Water Body"** refers to the water body into which surface water, wastewater, and effluent are discharged.
- v) **"Secondary Parameters"** are other water quality parameters that shall be used in baseline assessments as part of the Environmental Impact Assessment and other water quality monitoring purposes.
- w) **"Secretary"** means the Secretary of the Department of Environment and Natural Resources.
- x) **"Significant Effluent Quality Parameters"** are parameters specific to the processes of an establishment.
- y) **"Strong Wastewater"** refers to wastewater whose initial Biochemical Oxygen Demand (BOD) value before treatment is equal to or greater than 3,000 milligram per liter (mg/L).
- z) **"Surface Waters"** refer to waters (e.g. rivers, lakes, bays, etc.) which are open to the atmosphere and subject to surface runoff.
- aa) **"Treatment"** refers to any method, technique, or process designed to alter the physical, chemical, biological, or radiological character or composition of any waste or wastewater to reduce or prevent pollution.
- bb) **"Water Body"** means both natural and man-made bodies of fresh, brackish, and saline waters, and includes, but is not limited to, aquifers, groundwater, springs, creeks, streams, rivers, ponds, lagoons, water reservoirs, lakes, bays, estuarine, coastal and marine waters. Water bodies do not refer to those constructed, developed and used purposely as water treatment facilities and/or water storage for recycling and re-use, which are integral to process industry or manufacturing.
- cc) **"Water Pollution"** means any alteration of the physical, chemical or biological or radiological properties of a water body resulting in the impairment of its purity or quality.
- dd) **"Water Quality Guidelines (WQG)"** refer to the level for a water constituent or numerical values of physical, chemical, biological, and bacteriological or radiological parameters which are used to classify water resources and their use, which do not result in significant health risk.

These are not intended for direct enforcement but only for water quality management purposes, such as determining time trends, evaluating stages of deterioration or enhancement of the water quality, and as basis for taking positive action in preventing, controlling, or abating water pollution.

- ee) **“Water Quality Management Area (WQMA)”** are certain areas designated using appropriate physiographic units (i.e. watershed, river basins or water resources regions), having similar hydrological, hydrogeological, meteorological or geographic conditions which affect the physiochemical, biological and bacteriological reactions and diffusions of pollutants in the water bodies, or otherwise share common interest or face similar development programs, prospects or problems.

**SECTION 5.0 Classification of Water Bodies.** For purposes of maintaining water quality according to its intended beneficial usage, the following classification of water bodies shall be adopted (see Tables 1-2).

**Table 1. Water Body Classification and Usage of Freshwater**

Classification	Intended Beneficial Use
Class AA	Public Water Supply Class I – Intended primarily for waters having watersheds, which are uninhabited and/or otherwise declared as protected areas, and which require only approved disinfection to meet the latest PNSDW
Class A	Public Water Supply Class II – Intended as sources of water supply requiring conventional treatment (coagulation, sedimentation, filtration and disinfection) to meet the latest PNSDW
Class B	Recreational Water Class I – Intended for primary contact recreation (bathing, swimming, etc.)
Class C	1. Fishery Water for the propagation and growth of fish and other aquatic resources 2. Recreational Water Class II – For boating, fishing, or similar activities 3. For agriculture, irrigation, and livestock watering
Class D	Navigable waters

Note: For unclassified water bodies, classification shall be based on the beneficial use as determined by the Environmental Management Bureau (EMB).

**Table 2. Water Body Classification and Usage of Marine Waters**

Classification	Intended Beneficial Use
Class SA	1. Protected Waters – Waters designated as national or local marine parks, reserves, sanctuaries, and other areas established by law (Presidential Proclamation 1801 and other existing laws), and/or declared as such by appropriate government agency, LGUs, etc. 2. Fishery Water Class I – Suitable for shellfish harvesting for direct human consumption
Class SB	1. Fishery Water Class II – Waters suitable for commercial propagation of shellfish and intended as spawning areas for milkfish ( <i>Chanos chanos</i> ) and similar species 2. Tourist Zones – For ecotourism and recreational activities 3. Recreational Water Class I – Intended for primary contact recreation (bathing, swimming, skin diving, etc.)

<b>Classification</b>	<b>Intended Beneficial Use</b>
Class SC	<ol style="list-style-type: none"> <li>1. Fishery Water Class III – For the propagation and growth of fish and other aquatic resources and intended for commercial and sustenance fishing</li> <li>2. Recreational Water Class II – For boating, fishing, or similar activities</li> <li>3. Marshy and/or mangrove areas declared as fish and wildlife sanctuaries</li> </ol>
Class SD	Navigable waters

Note: For unclassified water bodies, classification shall be based on the beneficial use as determined by EMB.

**SECTION 6.0 Water Quality Guidelines.** The rules and regulations established in this section are intended to maintain and preserve the quality of all water bodies based on their intended beneficial usage and to prevent and abate pollution and contamination to protect public health, aquatic resources, crops, and other living organisms.

**6.1 Guidelines for Water Quality (Freshwater and Marine Waters).** The WQG provided for in Tables 3-6 shall be maintained for each water body classification. For purposes of this Order, the parameters defining the WQG are categorized as primary or secondary parameters.

Primary parameters (Table 3) are the required minimum water quality parameters to be monitored for each water body. Secondary parameters (Tables 4-6) are other water quality parameters to be used in baseline assessment as part of the Environmental Impact Assessment and other water quality monitoring purposes as defined in Table 3.1 (Recommended Parameters, Frequency and Duration of Sampling) of the Ambient Water Quality Monitoring Manual issued through EMB Memorandum Circular 2008-008.

Water quality monitoring procedures [i.e. water quality monitoring plan, sampling, quality assurance (QA), quality control (QC), etc.] shall also be in accordance with the above-mentioned EMB Memorandum Circular 2008-008.

**Table 3. Water Quality Guidelines for Primary Parameters**

Parameter	Unit	Water Body Classification								
		AA	A	B	C	D	SA	SB	SC	SD
BOD	mg/L	1	3	5	7	15	n/a	n/a	n/a	n/a
Chloride	mg/L	250	250	250	350	400	n/a	n/a	n/a	n/a
Color	TCU	5	50	50	75	150	5	50	75	150
Dissolved Oxygen <sup>(a)</sup> (Minimum)	mg/L	5	5	5	5	2	6	6	5	2
Fecal Coliform	MPN/100mL	<1.1	<1.1	100	200	400	<1.1	100	200	400
Nitrate as NO <sub>3</sub> -N	mg/L	7	7	7	7	15	10	10	10	15
pH (Range)		6.5-8.5	6.5-8.5	6.5-8.5	6.5-9.0	6.0-9.0	7.0-8.5	7.0-8.5	6.5-8.5	6.0-9.0
Phosphate	mg/L	<0.003	0.5	0.5	0.5	5	0.1	0.5	0.5	5
Temperature <sup>(b)</sup>	°C	26-30	26-30	26-30	25-31	25-32	26-30	26-30	25-31	25-32
Total Suspended Solids	mg/L	25	50	65	80	110	25	50	80	110

**Notes:**

MPN/100mL – Most Probable Number per 100 milliliter

n/a – Not Applicable

TCU – True Color Unit

(a) Samples shall be taken from 9:00 AM to 4:00 PM.

(b) The natural background temperature as determined by EMB shall prevail if the temperature is lower or higher than the WQG; provided that the maximum increase is only up to 10 percent and that it will not cause any risk to human health and the environment.

**Table 4. Water Quality Guidelines for Secondary Parameters-Inorganics**

Parameter	Unit	Water Body Classification								
		AA	A	B	C	D	SA	SB	SC	SD
Ammonia as NH <sub>3</sub> -N	mg/L	0.05	0.05	0.05	0.05	0.75	0.04	0.05	0.05	0.75
Boron	mg/L	0.5	0.5	0.5	0.75	3	0.5	0.5	5	20
Fluoride	mg/L	1	1	1	1	2	1.5	1.5	1.5	3
Selenium	mg/L	0.01	0.01	0.01	0.02	0.04	0.01	0.01	0.1	0.2
Sulfate	mg/L	250	250	250	275	500	250	250	275	500

**Table 5. Water Quality Guidelines for Secondary Parameters-Metals<sup>(c)</sup>**

Parameter	Unit	Water Body Classification								
		AA	A	B	C	D	SA	SB	SC	SD
Arsenic	mg/L	0.01	0.01	0.01	0.02	0.04	0.01	0.01	0.02	0.04
Barium	mg/L	0.7	0.7	0.7	3	4	0.1	0.7	1	4
Cadmium	mg/L	0.003	0.003	0.003	0.005	0.01	0.003	0.003	0.005	0.01
Chromium as Hexavalent Chromium (Cr <sup>6+</sup> )	mg/L	0.01	0.01	0.01	0.01	0.02	0.05	0.05	0.05	0.1
Copper as Dissolved Copper	mg/L	0.02	0.02	0.02	0.02	0.04	0.02	0.02	0.02	0.04
Iron	mg/L	1	1	1	1.5	7.5	1.5	1.5	1.5	7.5
Lead	mg/L	0.01	0.01	0.01	0.05	0.1	0.01	0.01	0.05	0.1
Manganese	mg/L	0.2	0.2	0.2	0.2	2	0.4	0.4	0.4	4
Mercury	mg/L	0.001	0.001	0.001	0.002	0.004	0.001	0.001	0.002	0.004
Nickel	mg/L	0.02	0.02	0.04	0.2	1	0.02	0.04	0.06	0.3
Zinc	mg/L	2	2	2	2	4	0.04	0.05	0.8	1.5

Note:

(c) Unless otherwise specified, the above parameters are expressed as total metals.

**Table 6. Water Quality Guidelines for Secondary Parameters-Organics**

Parameter	Unit	Water Body Classification								
		AA	A	B	C	D	SA	SB	SC	SD
Benzo(a)pyrene	µg/L	0.7	0.7	0.7	1.5	3	0.7	0.7	1.5	3
BTEX										
Benzene	mg/L	0.01	0.01	0.01	0.05	0.5	0.01	0.01	0.05	0.5
Toluene	mg/L	0.7	0.7	1	4	5	1	1	4	5
Ethylbenzene	mg/L	0.3	0.3	0.3	1.5	2	0.2	0.2	1.5	2
Xylenes	mg/L	0.5	0.5	0.5	1.5	1.8	0.5	0.5	1.5	1.8
Cyanide as Free Cyanide	mg/L	0.07	0.07	0.07	0.1	0.2	0.02	0.02	0.1	0.2
Organophosphate as Malathion	µg/L	1	1	1	3	6	1	1	3	6
Oil and Grease	mg/L	<1	1	1	2	5	1	2	3	5
Polychlorinated Biphenyls <sup>(d)</sup>	µg/L	<0.1	<0.1	0.2	0.5	1	0.3	0.3	0.5	1
Phenol & Phenolic Substances <sup>(e)</sup>	mg/L	<0.001	<0.001	<0.001	0.05	0.5	<0.001	<0.001	0.05	0.5
Surfactants (MBAS)	mg/L	<0.025	0.2	0.3	1.5	3	0.3	0.3	1.5	3
Trichloroethylene	mg/L	0.07	0.07	0.07	0.9	2	0.07	0.07	0.9	2
Total Organochlorine Pesticides <sup>(f)</sup>	µg/L	n/a	n/a	50	50	50	50	50	50	50
Aldrin	µg/L	0.03	0.03	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlordane	µg/L	0.2	0.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dichlorodiphenyltrichloroethane (DDT)	µg/L	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dieldrin	µg/L	0.03	0.03	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Endrin	µg/L	0.6	0.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heptachlor	µg/L	0.03	0.03	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Lindane	µg/L	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Methoxychlor	µg/L	50	50	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Toxaphene	µg/L	4	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Notes:

CAS - Chemical Abstracts Service

IUPAC - International Union of Pure and Applied Chemistry

MBAS - Methylene Blue Active Substances

$\mu\text{g/L}$  -- microgram per liter

(d) Polychlorinated Biphenyls (PCBs) include the nine Aroclors and 19 individual PCB congeners described below:

Compound	CAS#	IUPAC#	Compound	CAS#	IUPAC#
Aroclor 1016	12674-11-2		2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	52
Aroclor 1221	11104-28-2		2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	66
Aroclor 1232	11141-16-5		2,2',3,4,5'-Pentachlorobiphenyl	38380-02-8	87
Aroclor 1242	53469-21-9		2,2',4,5,5'-Pentachlorobiphenyl	37680-73-2	101
Aroclor 1248	12672-29-6		2,3,3',4',6-Pentachlorobiphenyl	38380-03-9	110
Aroclor 1254	11097-69-1		2,2',3,4,4',5'-Hexachlorobiphenyl	35065-28-2	138
Aroclor 1260	11096-82-5		2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	141
Aroclor 1262	37324-23-5		2,2',3,5,5',6-Hexachlorobiphenyl	52663-63-5	151
Aroclor 1268	11100-14-4		2,2',4,4',5,5'-Hexachlorobiphenyl	35065-27-1	153
2-Chlorobiphenyl	2051-60-7	1	2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	170
2,3-Dichlorobiphenyl	16605-91-7	5	2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	180
2,2',5-Trichlorobiphenyl	37680-65-2	18	2,2',3,4,4',5,6-Heptachlorobiphenyl	52663-69-1	183
2,4',5-Trichlorobiphenyl	16606-02-3	31	2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	187
2,2',3,5'-Tetrachlorobiphenyl	41464-39-5	44	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	206

(e) Phenols include 2-chlorophenol, 2,4-dichlorophenol, and 2,4,6-trichlorophenol.

(f) When monitoring for Class AA and A waters, the individual organochlorine pesticides shall be monitored. For Class B, C, D, SA, SB, SC, and SD; Total Organochlorine Pesticides shall be monitored, which refers to the organochlorine pesticides listed in Table 0-6 plus Benzene Hexachloride (BHC) ( $\alpha, \beta, \delta, \gamma$ ), 4,4' Dichlorodiphenyldichloroethane (DDD), 4,4' Dichlorodiphenyldichloroethylene (DDE), Endosulfan (I, II, and sulfate).

**6.2 Guidelines for Groundwater Quality.** Groundwater shall be maintained at a quality consistent with its intended beneficial usage. For purposes of preserving and protecting groundwater quality, the WQG set forth in Table 7 shall be maintained.

**Table 7. Groundwater Quality Guidelines**

Intended Beneficial Use	Groundwater Quality Guidelines
Source of Potable Water and Other Domestic Use	Adopt Class A WQG (except BOD and Dissolved Oxygen)
Bathing and Other Primary Contact Recreation	Adopt Class B WQG (except BOD and Dissolved Oxygen)
Irrigation, Fish Culture, Livestock Watering	Adopt Class C WQG (except BOD, Dissolved Oxygen, and Total Suspended Solids)

**6.3 Important Considerations.** The WQG are set regardless of the assimilative capacity of water bodies, and to ensure that assimilative capacities are not exceeded, the WQG set forth in Tables 3-6 are:

- Annual average of at least 10 data sets for primary parameters except for fecal coliform.
- Annual average of at least 4 data sets for secondary inorganic parameters.
- Geometric mean of at least three data sets per quarter for fecal coliform. Further, maximum allowable limit for fecal coliform is twice the WQG per sample.
- Maximum allowable limit for secondary metals and organics parameters.
- For water quality parameters that are naturally occurring in the Philippines, the natural background concentration as determined by EMB shall prevail if the concentration is higher than the WQG; provided that the maximum increase is only up to 10 percent and that it will not cause any risk to human health and the environment.

**SECTION 7.0 General Effluent Standards.** Discharges from any point source shall at all times meet the effluent standards set forth in Tables 2-3 to maintain the required water quality per water body classification. The GES shall be used regardless of the industry category.

Effluent used for irrigation and other agricultural purposes shall conform to the Department of Agriculture Administrative Order 2007-26 or the Guidelines on the Procedures and Technical Standards for the Issuance of a Certification Allowing for the Safe Re-use of Wastewater for the Purposes of Irrigation and Other Agricultural Uses.

Effluent quality monitoring procedures (i.e. effluent quality monitoring plan, sampling, QA, QC, etc.) shall be in accordance with the Effluent Quality Monitoring Manual issued through EMB Memorandum Circular 2008-008.

**7.1 Significant Effluent Quality Parameters per Sector.** For purposes of streamlining compliance and enforcement of the GES, the significant effluent quality parameters per sector are listed in Table 8.

**Table 8. Significant Effluent Quality Parameters per Sector**

PSIC Code	Industry Category	Significant Parameters
<b>A. Agriculture, Forestry and Fishing</b>		
014	Animal production	BOD, Total Suspended Solids, Total Coliform (for Class B and SB), Ammonia, Phosphate
032	Aquaculture (excluding fish pens)	BOD, Total Suspended Solids, Ammonia, Nitrate, Phosphate, Sulfate
<b>B. Mining and Quarrying</b>		
05	Mining of coal and lignite	Color, pH, Total Suspended Solids, Nitrate, Sulfate, Manganese, Iron, Arsenic, Cadmium, Mercury, Lead
06	Extraction of crude petroleum and natural gas, and support activities	pH, Total Suspended Solids, Sulfate, Fluoride, Barium, Chromium, Nickel, Copper, Zinc, Mercury, Oil and Grease, Phenol & Phenolic Substances, Benzene, Toluene, Ethylbenzene, Xylenes, Benzo(a)pyrene
07100	Mining of iron ores	Color, pH, Total Suspended Solids, Nitrate, Manganese, Iron, Arsenic, Cadmium, Lead
0722	Mining of precious metal ores	
	Gold ore mining	pH, Total Suspended Solids, Nitrate, Cyanide, Copper, Zinc, Arsenic, Mercury, Lead
	Silver ore mining	pH, Total Suspended Solids, Nitrate, Cyanide, Copper, Zinc, Arsenic, Mercury, Lead
	Platinum ore mining	pH, Total Suspended Solids, Nitrate, Sulfate, Cyanide, Manganese, Iron, Copper, Zinc, Arsenic, Cadmium, Mercury, Lead
07291	Copper ore mining	pH, Total Suspended Solids, Nitrate, Sulfate, Cyanide, Iron, Copper, Zinc, Arsenic, Cadmium, Mercury, Lead
07292	Chromite ore mining	pH, Total Suspended Solids, Nitrate, Chromium, Arsenic, Cadmium, Mercury, Lead
07293	Manganese ore mining	pH, Total Suspended Solids, Nitrate, Manganese, Arsenic, Cadmium, Lead
07294	Nickel ore mining	pH, Total Suspended Solids, Manganese, Arsenic, Cadmium, Lead, Nickel
08913	Pyrite mining	pH, Total Suspended Solids, Sulfate, Manganese, Iron, Copper, Arsenic, Lead

PSIC Code	Industry Category	Significant Parameters
08914	Rock phosphate mining	pH, COD, Total Suspended Solids, Ammonia, Phosphate, Fluoride, Surfactants
C. Manufacturing		
10110	Slaughtering and meat packing	Temperature, pH, BOD, Total Suspended Solids, Ammonia, Nitrate, Phosphate, Oil and Grease
10120	Production processing and preserving of meat and meat products	Temperature, pH, BOD, Total Suspended Solids, Oil and Grease
1020	Processing and preserving of fish, crustaceans and mollusks (except carrageenan)	Temperature, pH, BOD, Total Suspended Solids, Nitrate, Oil and Grease
10205	Processing of seaweeds; manufacture of agar-agar or carrageenan	Temperature, pH, COD, Total Suspended Solids
1030	Processing and preserving of fruits and vegetables	Temperature, pH, BOD, Total Suspended Solids, Oil and Grease
104	Manufacture of vegetable and animal oils and fats	Temperature, pH, BOD, Total Suspended Solids, Nitrate, Ammonia, Oil and Grease
105	Manufacture of dairy products	Temperature, pH, BOD, Total Suspended Solids, Nitrate, Oil and Grease
106	Manufacture of grain mill products, starches and starch products (except rice, corn, and cassava flour milling)	Temperature, pH, COD, Total Suspended Solids, Nitrate
10610	Rice/corn milling	BOD, Total Suspended Solids
10621	Cassava flour milling	BOD, Total Suspended Solids, Cyanide
107	Manufacture of other food products (except sugar)	Temperature, BOD, Total Suspended Solids, Oil and Grease
1072	Manufacture of sugar	
	Sugar milling	Temperature, pH, BOD, Total Suspended Solids, Nitrate
	Sugar refining	Temperature, pH, COD, Total Suspended Solids, Nitrate
10800	Manufacture of prepared animal feeds	Temperature, pH, BOD, Total Suspended Solids, Nitrate, Ammonia, Oil and Grease
11	Manufacture of beverages	Color, Temperature, pH, BOD, Total Suspended Solids, Nitrate, Ammonia
12	Manufacture of tobacco products	Color, Temperature, pH, COD, Total Suspended Solids
13	Manufacture of textiles	Color, Temperature, pH, BOD, COD, Chromium, Phenol & Phenolic Substances, Oil and Grease, Surfactants, Ammonia, Trichloroethylene, Copper

PSIC Code	Industry Category	Significant Parameters
14	Manufacture of wearing apparel	Temperature, pH, Surfactants, Color, COD
15110	Tanning and dressing of leather	Color, pH, COD, Total Suspended Solids, Total Coliform, Ammonia, Chloride, Chromium, Oil and Grease, Phenol & Phenolic Substances
1621	Manufacture of veneer sheets; manufacture of plywood, laminated board, particle board and other panels and board; wooden window and screens	COD, Total Suspended Solids, Nitrate, Sulfate, Boron, Chromium, Copper, Arsenic, Benzo(a)pyrene
17012	Pulp milling including manufacture of pulp, paper and paperboard	Color, Temperature, pH, COD, Total Suspended Solids, Nitrate, Phenol & Phenolic Substances, Sulfate, Phosphate, Ammonia
17013	Paper and paperboard milling	Color, Temperature, pH, COD, Total Suspended Solids, Nitrate, Phosphate, Ammonia, Barium, Boron, Chloride, Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Zinc
18110	Printing	Color, pH, COD, Total Suspended Solids, Cadmium, Chromium, Zinc, Oil and Grease
19100	Manufacture of coke oven products	Temperature, pH, COD, Total Suspended Solids, Ammonia, Sulfate, Cyanide, metals (except Arsenic and Barium), Oil and Grease, Phenol & Phenolic Substances, Polychlorinated Biphenyls, Benzene, Toluene, Ethylbenzene, Xylenes, Benzo(a)pyrene
19200	Manufacture of refined petroleum products	Temperature, pH, COD, Total Suspended Solids, Ammonia, Nitrate, Sulfates, Phosphate, Cyanide, Fluoride, Chloride, Chromium, Iron, Nickel, Copper, Zinc, Lead, Oil and Grease, Benzene, Toluene, Ethylbenzene, Xylenes, Benzo(a)pyrene, Phenol & Phenolic Substances
19900	Manufacture of other fuel products (biodiesel)	Temperature, pH, COD, Total Suspended Solids, Oil and Grease
20111, 20114	Manufacture of ethanol	
	Manufacture of ethanol for: <ul style="list-style-type: none"> <li>• Food and beverage</li> <li>• Fuel application</li> </ul>	Temperature, pH, BOD, Total Suspended Solids, Ammonia, Nitrate, Sulfate, Chloride
	Blending of ethanol for: <ul style="list-style-type: none"> <li>• Antiseptic</li> <li>• Solvent (denatured)</li> </ul>	pH, COD

<b>PSIC Code</b>	<b>Industry Category</b>	<b>Significant Parameters</b>
20112	Manufacture of industrial (compressed/liquefied) gases	Temperature, pH, COD, Nitrate, Sulfate, Chloride, Mercury, and metals depending on the catalysts used
20113, 20116, 20117, 20119	Manufacture of inorganic, organic and other basic chemicals	Color, Temperature, pH, COD, Total Suspended Solids and other parameters depending on the major chemical/s manufactured
20115	Manufacture of alcohol except ethyl alcohol	Temperature, pH, COD, and metals depending on the catalysts used
20120	Manufacture of fertilizers and nitrogen compounds	Temperature, pH, COD, Total Suspended Solids, Ammonia, Nitrate, Phosphate, Sulfate, Fluoride, and metals depending on the catalysts used
2013	Manufacturing of plastics and synthetic rubber in primary forms	Temperature, pH, COD, Ammonia, Sulfate, Cyanide, Oil and Grease, Benzene, Toluene, Ethylbenzene, Xylenes, Benzo(a)pyrene, Phenol & Phenolic Substances, and metals depending on the catalysts used
20210	Manufacture of pesticides and other agro-chemical products	pH, COD, Total Suspended Solids, Oil and Grease, Benzene, Toluene, Ethylbenzene, Xylenes, Trichloroethylene, Malathion, Total Organochlorine Pesticides, and metals depending on the catalysts used
2022, 20293	Manufacture of paints, ink, varnishes and similar coating materials	Color, Temperature, pH, COD, Total Suspended Solids, Barium, Selenium, Chromium, Nickel, Copper, Zinc, Arsenic, Cadmium, Mercury, Lead, Oil and Grease, Benzene, Toluene, Ethylbenzene, Xylenes, Phenol & Phenolic Substances, Trichloroethylene
2023	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	Temperature, pH, COD, Total Suspended Solids, Ammonia, Nitrate, Phosphate, Sulfate, Chloride, Fluoride, Boron, Selenium, Zinc, Oil and Grease, Surfactants
20294	Manufacture of glues and adhesives	
	Synthetic glues and adhesives	pH, COD, Cyanide, Zinc, Mercury, Oil and Grease, Benzene, Toluene, Ethylbenzene, Xylenes, Phenol & Phenolic Substances
	Animal/plant derived glues and adhesives	pH, COD, Boron, Chloride
20299	Manufacture of miscellaneous chemical products, not elsewhere classified	Color, pH, Temperature, COD, Total Suspended Solids and other parameters depending on the major chemical/s manufactured

PSIC Code	Industry Category	Significant Parameters
2030	Manufacture of man-made fibers (except glass fibers)	Temperature, COD, Total Suspended Solids
21001	Manufacture of drugs and medicines including biological products such as bacterial and virus vaccines, sera and plasma	pH, COD, Total Suspended Solids
2310	Manufacture of glass and glass products	Color, Temperature, pH, Total Suspended Solids, Fluoride, Boron, Selenium, Arsenic, Lead, Oil and Grease
239	Manufacture of ceramics, clay products, construction aggregates, asphalt, asbestos and other non-metallic minerals (except cement)	Color, Temperature, pH, COD, Chromium, Copper, Zinc, Cadmium, Lead
23940	Manufacture of cement	Temperature, pH, Total Suspended Solids
241, 2431	Manufacture of iron and steel	Temperature, pH, COD, Total Suspended Solids, Ammonia, Nitrate, Phosphate, Sulfate, Fluoride, Chloride, Cyanide, Barium, Chromium, Manganese, Iron, Nickel, Zinc, Cadmium, Mercury, Lead, Oil and Grease, Benzene, Toluene, Ethylbenzene, Xylenes
24210	Manufacture of precious metals	Temperature, pH, COD, Total Suspended Solids, Ammonia, Nitrate, Sulfate, Cyanide, Chloride, Boron, Chromium, Iron, Copper, Zinc, Arsenic, Cadmium, Mercury, Lead, Oil and Grease, Phenol & Phenolic Substances
24220	Non-ferrous smelting and refining, except precious metals	Temperature, pH, COD, Total Suspended Solids, Selenium, Manganese, Iron, Nickel, Copper, Zinc, Arsenic, Cadmium, Mercury, Lead
24230	Non-ferrous rolling, drawing, and extrusion mills	Temperature, pH, COD, Total Suspended Solids, Ammonia, Phosphate, Boron, Fluoride, Zinc, Arsenic, Cadmium, Chromium, Mercury, Lead, Cyanide, Phenol & Phenolic Substances
24240	Manufacture of pipe fittings of non-ferrous metal	Temperature, pH, COD, Total Suspended Solids, Ammonia, Phosphate, Boron, Fluoride, Zinc, Arsenic, Cadmium, Chromium, Mercury, Lead, Cyanide, Phenol & Phenolic Substances, Oil and Grease

PSIC Code	Industry Category	Significant Parameters
24290	Manufacture of basic precious and non-ferrous metal, not elsewhere classified	Temperature, pH, COD, Total Suspended Solids, Ammonia, Phosphate, Boron, Fluoride, Zinc, Arsenic, Cadmium, Chromium, Mercury, Lead, Cyanide, Phenol & Phenolic Substances
2431	Casting/foundry of iron and steel	Temperature, pH, COD, Total Suspended Solids, Copper, Zinc, Oil and Grease
2432	Casting of Non-ferrous metal casting such as aluminum, copper and zinc alloys	Temperature, pH, COD, Total Suspended Solids, Sulfate, Fluoride, Iron, Copper, Zinc, Arsenic, Cadmium, Chromium, Mercury, Lead
25920	Treatment, coating, and machining of metals	pH, COD, Total Suspended Solids, Ammonia, Nitrate, Phosphate, Sulfate, Cyanide, Fluoride, Boron, Chromium, Iron, Nickel, Copper, Zinc, Cadmium, Lead, Oil and Grease, Trichloroethylene
261	Manufacture of electronic components	pH, COD, Total Suspended Solids, Fluoride, Chloride, Boron, Oil and Grease, Trichloroethylene, and Metals depending on the major electronic components manufactured
2720	Manufacture of batteries and accumulators	pH, COD, Total Suspended Solids, Fluoride, Selenium, Manganese, Iron, Nickel, Copper, Zinc, Cadmium, Mercury, Lead, Oil and Grease
D. Electricity, Gas, Steam and Air Conditioning Supply		
35100	Electric power generation (except transmission and distribution)	
	Coal	Temperature, pH, COD, Total Suspended Solids, Phosphate, Sulfate, Chloride, Boron, Chromium, Nickel, Copper, Zinc, Arsenic, Cadmium, Mercury, Lead, Oil and Grease
	Natural gas	Temperature, pH, COD, Total Suspended Solids, Phosphate, Chloride, Chromium, Zinc
	Oil (Petroleum)	Temperature, pH, COD, Total Suspended Solids, Phosphate, Chloride, Chromium, Copper, Zinc, Arsenic, Cadmium, Lead, Oil and Grease
	Geothermal	Temperature, pH, COD, Total Suspended Solids, Chloride, Boron, Chromium, Zinc, Arsenic, Cadmium, Mercury, Lead
	Hydro	Oil and Grease
	Biomass	Temperature, pH, COD, Total Suspended Solids, and other parameters depending on the nature of the feedstock.

PSIC Code	Industry Category	Significant Parameters
35200	Manufacture of gas; distribution of gaseous fuels through mains	Temperature, pH, COD, Total Suspended Solids, Nitrate, Cyanide, Chloride, Chromium, Nickel, Zinc, Arsenic, Cadmium, Mercury, Lead, Oil and Grease, Benzene, Toluene, Ethylbenzene, Xylenes, Benzo(a)pyrene, Phenol & Phenolic Substances
35300	Air conditioning supply and production of ice (except steam production)	Temperature, pH, COD, Ammonia, Nitrate, Phosphate, Sulfate, Chloride, Chromium, Zinc
<b>E. Water Supply; Sewerage, Waste Management and Remediation Activities</b>		
36000	Water collection, treatment and supply (except those intended to prevent pollution)	pH, Total Suspended Solids, Chloride, Fluoride, Iron
37000	Sewerage (operation of sewer systems or sewage treatment facilities that collect, treat, and dispose of sewage)	BOD, Fecal Coliform, Ammonia, Nitrate, Phosphate, Oil and Grease, Surfactants
38210	Treatment and disposal of non-hazardous waste	Color, Temperature, pH, COD, Total Suspended Solids, Total Coliform, Ammonia, Nitrate, Phosphate, Sulfate, Chloride, Oil and Grease
38220	Treatment and disposal of hazardous waste	Color, Temperature, pH, COD, Total Suspended Solids, and other parameters depending on the nature of their activities
39000	Remediation activities and other waste management services	Color, Temperature, pH, COD, Total Suspended Solids and other parameters depending on the nature of remediation activity
<b>G. Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles</b>		
452, 454	Maintenance and repair of vehicles, their parts and components (excluding vulcanizing/tire related preparations)	Color, pH, Total Suspended Solids, Ammonia, Nitrate, Nickel, Cadmium, Mercury, Lead, Oil and Grease, Benzo(a)pyrene, Surfactants
47300, 4661	Wholesale and retail sale of automotive fuels	Total Suspended Solids, Oil and Grease, Benzene, Toluene, Ethylbenzene, Xylenes, Benzo(a)pyrene
<b>H. Transportation and Storage</b>		
52104	Cold storage	Color, Temperature, pH, COD, Total Suspended Solids, Ammonia, Oil and Grease
<b>I. Accommodation and Food Services</b>		
55	Hotels, motels, resorts, dormitories and other accommodation services	BOD, Fecal Coliform, Ammonia, Nitrate, Phosphate, Oil and Grease, Surfactants

<b>PSIC Code</b>	<b>Industry Category</b>	<b>Significant Parameters</b>
56	Restaurants, food chains, bars and other food/beverage services	BOD, Total Suspended Solids, Oil and Grease, Surfactants
<b>L. Real Estate Activities</b>		
681	Real estate activities with own or leased property	BOD, Fecal Coliform, Ammonia, Nitrate, Phosphate, Oil and Grease, Surfactants
<b>M. Professional, Scientific and Technical Activities</b>		
71200	Technical testing and analysis	All significant parameters depending on the nature of their activity
7210	Research and experimental development on natural sciences and engineering	All significant parameters depending on the nature of their activity
75	Veterinary activities	Color, pH, COD, Total Suspended Solids, Fecal Coliform, Oil and Grease, Surfactants
<b>P. Education</b>		
85	Public and private education (including support activities)	BOD, Fecal Coliform, Ammonia, Nitrate, Phosphate, Oil and Grease, and all significant parameters depending on the nature of their activity
<b>Q. Human Health and Social Works</b>		
86, 87	Hospitals, clinics, nursing homes and other human health and residential care activities	Color, Temperature, pH, BOD, Total Suspended Solids, Fecal Coliform, Ammonia, Nitrate, Phosphate, Oil and Grease, Surfactants
86900	Other human health activities - medical laboratories inside and outside of medical facilities	All significant parameters depending on the nature of their activity
<b>S. Other Service Activities</b>		
96210	Washing and dry cleaning of textile and fur products	COD, Total Suspended Solids, Ammonia, Chloride, Barium, Oil and Grease, Surfactants, Trichloroethylene
96300	Funeral and related activities	COD, Total Suspended Solids, Total Coliform, Ammonia, Phosphate, Sulfate
<b>Other Classifications</b>		
OC1	Public markets	Color, Temperature, pH, BOD, Total Suspended Solids, Ammonia, Nitrate, Chloride, Oil and Grease
OC2	Scrubbing of flue gases from firing systems (primarily in scrubbing of flue gases from firing systems). This shall not apply to wastewater from other industrial waste-	Color, Temperature, pH, COD, Sulfate, Fluoride, Chromium, Nickel, Copper, Cadmium, Mercury

PSIC Code	Industry Category	Significant Parameters
	gas-scrubbing systems, from cooling circuits of power stations and industrial processes	
OC3	Effluent from oil water separators of auxiliary facilities	pH, Total Suspended Solids, Oil and Grease
OC4	Effluent from cooling ponds, cooling towers, and similar facilities (non-contact cooling system)	Temperature, pH

Notes:

COD – Chemical Oxygen Demand

PSIC – Philippine Standard Industrial Classification (2009)

1. For sectors not included in Table 8 of this Order, EMB Central Office shall determine the significant effluent parameters for the said sector.
2. Domestic sewage of all establishments shall be monitored for the same parameters listed in PSIC No. 37000.

**7.2 Effluent Standards.** Consistent with the goal of maintaining the quality of water bodies based on their intended beneficial usages, Table 9 shall be enforced and complied with at all times.

**7.3 Effluent Standards for BOD for Strong Wastewater.** For establishments with influent BOD equal to or greater than 3,000 mg/L and the receiving water body is Class C, D, SC, or SD, the applicable effluent standards in Table 10 shall at all times be enforced and complied with.

For parameters other than BOD, Table 9 shall apply.

Table 9. Effluent Standards<sup>(g)</sup>

Parameter	Unit	Water Body Classification								
		AA	A	B	C	D	SA	SB	SC	SD
Physical-Chemical										
Ammonia as NH <sub>3</sub> -N	mg/L	NDA	0.5	0.5	0.5	7.5	NDA	0.5	0.5	7.5
BOD	mg/L	NDA	20	30	50	120	NDA	30	100	150
Boron	mg/L	NDA	2	2	3	12	NDA	2	20	80
Chloride	mg/L	NDA	350	350	450	500	NDA	n/a	n/a	n/a
COD	mg/L	NDA	60	60	100	200	NDA	60	200	300
Color	TCU	NDA	100	100	150	300	NDA	100	150	300
Cyanide as Free Cyanide	mg/L	NDA	0.14	0.14	0.2	0.4	NDA	0.04	0.2	0.4
Fluoride	mg/L	NDA	2	2	2	4	NDA	3	3	6
Nitrate as NO <sub>3</sub> -N	mg/L	NDA	14	14	14	30	NDA	20	20	30
pH (Range)		NDA	6.0-9.0	6.0-9.0	6.0-9.5	5.5-9.5	NDA	6.5-9.0	6.0-9.0	5.5-9.5
Phosphate	mg/L	NDA	1	1	1	10	NDA	1	1	10
Selenium	mg/L	NDA	0.02	0.02	0.04	0.08	NDA	0.02	0.2	0.4
Sulfate	mg/L	NDA	500	500	550	1,000	NDA	500	550	1,000
Surfactants (MBAS)	mg/L	NDA	2	3	15	30	NDA	3	15	30
Temperature <sup>(h)</sup>	°C change	NDA	3	3	3	3	NDA	3	3	3
Total Suspended Solids	mg/L	NDA	70	85	100	150	NDA	70	100	150
Metals										
Arsenic	mg/L	NDA	0.02	0.02	0.04	0.08	NDA	0.02	0.04	0.08
Barium	mg/L	NDA	1.5	1.5	6	8	NDA	1.5	2	8
Cadmium	mg/L	NDA	0.006	0.006	0.01	0.02	NDA	0.006	0.01	0.02
Chromium as Hexavalent Chromium (Cr <sup>6+</sup> )	mg/L	NDA	0.02	0.02	0.02	0.04	NDA	0.1	0.1	0.2

Parameter	Unit	Water Body Classification								
		AA	A	B	C	D	SA	SB	SC	SD
Copper as dissolved Copper	mg/L	NDA	0.04	0.04	0.04	0.08	NDA	0.04	0.04	0.08
Iron	mg/L	NDA	5	5	7.5	35	NDA	7.5	7.5	35
Lead	mg/L	NDA	0.02	0.02	0.1	0.2	NDA	0.02	0.1	0.2
Manganese	mg/L	NDA	2	2	2	20	NDA	4	4	40
Mercury	mg/L	NDA	0.002	0.002	0.004	0.008	NDA	0.002	0.004	0.008
Nickel	mg/L	NDA	0.1	0.2	1	5	NDA	0.2	0.3	1.5
Zinc	mg/L	NDA	4	4	4	8	NDA	0.1	1.5	3
<b>Organics</b>										
Benzo(a)pyrene	µg/L	NDA	1.5	1.5	3	6	NDA	1.5	3	6
BTEX										
Benzene	mg/L	NDA	0.1	0.1	0.5	5	NDA	0.1	0.5	5
Toluene	mg/L	NDA	3.5	5	20	25	NDA	5	20	25
Ethylbenzene	mg/L	NDA	1.5	1.5	7.5	10	NDA	1	7.5	10
Xylenes	mg/L	NDA	5	5	15	18	NDA	5	15	18
Malathion (Organophosphate)	µg/L	NDA	1	1	3	6	NDA	1	3	6
Oil and Grease	mg/L	NDA	5	5	5	15	NDA	5	10	15
Polychlorinated Biphenyls <sup>(i)</sup>	µg/L	NDA	<0.1	<0.1	<0.1	<0.1	NDA	<0.1	<0.1	<0.1
Phenol & Phenolic Substances <sup>(j)</sup>	mg/L	NDA	0.01	0.01	0.5	5	NDA	0.01	0.5	5
Trichloroethylene	mg/L	NDA	0.7	0.7	9	20	NDA	0.7	9	20
Total Organochlorine Pesticides <sup>(k)</sup>	µg/L	NDA	<0.419	50	50	50	NDA	50	50	50
Aldrin	µg/L	NDA	<0.02	<0.02	<0.02	<0.02	NDA	<0.02	<0.02	<0.02
Chlordane	µg/L	NDA	<0.02	<0.02	<0.02	<0.02	NDA	<0.02	<0.02	<0.02

Parameter	Unit	Water Body Classification								
		AA	A	B	C	D	SA	SB	SC	SD
DDT	µg/L	NDA	<0.04	<0.04	<0.04	<0.04	NDA	<0.04	<0.04	<0.04
Dieldrin	µg/L	NDA	<0.02	<0.02	<0.02	<0.02	NDA	<0.02	<0.02	<0.02
Endrin	µg/L	NDA	<0.02	<0.02	<0.02	<0.02	NDA	<0.02	<0.02	<0.02
Heptachlor	µg/L	NDA	<0.02	<0.02	<0.02	<0.02	NDA	<0.02	<0.02	<0.02
Lindane	µg/L	NDA	<0.02	<0.02	<0.02	<0.02	NDA	<0.02	<0.02	<0.02
Methoxychlor	µg/L	NDA	<0.03	<0.03	<0.03	<0.03	NDA	<0.03	<0.03	<0.03
Toxaphene	µg/L	NDA	<0.03	<0.03	<0.03	<0.03	NDA	<0.03	<0.03	<0.03
<b>Microbiological</b>										
Fecal Coliform	MPN/100mL	NDA	4	200	400	800	NDA	200	400	800
Total Coliform	MPN/100mL	NDA	3,000	3,000	10,000	15,000	NDA	3,000	10,000	15,000

Notes:

NDA – No Discharge Allowed

(g) GES values are maximum allowable limit.

(h) GES values for temperature refer to the temperature difference of the background value and discharge point. Specific sampling locations shall be established based on the EMB Ambient Water and Effluent Quality Monitoring Manual. Sampling locations for temperature monitoring, established and approved by EMB, prior to this Order shall remain valid.

(i) PCBs include the nine Aroclors and 19 individual PCB congeners described in Section 6.1 of this Order.

(j) Phenols include 2-chlorophenol, 2,4-dichlorophenol, and 2,4,6-trichlorophenol

(k) When monitoring for Class A waters, the individual organochlorine pesticides shall be monitored. For Class B, C, D, SB, SC, and SD, Total Organochlorine Pesticides shall be monitored, which refers to the organochlorine pesticides listed in Table 0-2 plus BHC (α,β,δ,γ), 4,4'DDD, 4,4'DDE, Endosulfan (I, II, and sulfate).

**Table 10. Effluent Standards for BOD Applicable to Establishments with Influent BOD of  $\geq 3,000$  mg/L**

Influent BOD (mg/L)	Units	Class C	Class D	Class SC	Class SD
3,000 to <6,500	mg/L	100	150	100	150
6,500 to <10,000	mg/L	200	300	200	300
10,000 to 30,000	mg/L	600	1,000	600	1,000
>30,000	mg/L	900	1,500	900	1,500

**SECTION 8.0 Modification of WQG and GES.** Any person, both natural and juridical, may request for the modification of the WQG and GES as described in this section.

The request shall include a clear and scientifically valid evidence having a probative value to demonstrate that such modification is consistent with RA 9275 and its Implementing Rules and Regulations. Request for modification shall be submitted to the DENR Secretary.

**8.1 Modification of Designated Uses.** If the DENR Secretary, through EMB, determines that the request for modification is valid, the DENR shall promulgate such modification in accordance with RA 9275.

**8.2 Modification of WQG Values.** Any person, both natural and juridical, may request for the modification of a class-specific WQG value. If the DENR Secretary, through EMB, determines that the request is valid, the DENR shall promulgate such modification in accordance with RA 9275. Modification of WQG value of a water segment shall not result in a modification of the designated use of the water segment.

**8.3 Modification of Significant Effluent Quality Parameters and GES Values.** Any person, both natural and juridical, may request for the modification of the significant effluent quality parameters per sector and/or the GES values. If the DENR Secretary, through the EMB, determines that the request is valid, the DENR shall promulgate such modification in accordance with RA 9275. Provided that, modification of the GES value shall not result to exceedance of the WQG with respect to the designated use of the receiving water body.

In cases where a particular significant parameter is present in an establishment's waste stream but is not listed in Table 8 of this Order; DENR, through the EMB, shall require the establishment to comply with such particular significant parameter.

In cases where a particular significant parameter is not present in an establishment's waste stream, such establishment may request the DENR, through the EMB, the exclusion of such particular significant parameter in its succeeding monitoring regime provided the following conditions are met:

- a) Parameter of concern is below the method detection level (MDL) in its effluent for at least 10 monitoring events, provided that the MDL is based on the EMB Approved Method of Analysis; and
- b) No change in technology and raw materials used in its operations or processes.

EMB may conduct validation to attest the modification request of the establishment.

**SECTION 9.0 Periodic Review.** Pursuant to Section 19 of RA 9275, this Order shall be reviewed periodically, and amended as necessary.

**SECTION 10.0 Grace Period.** A grace period of not more than five (5) years may be given, provided that the establishment submits Compliance Action Plan and periodic status of implementation to the DENR on the steps taken for the establishment's compliance schedule within the prescribed grace period. Cases wherein grace period may be given shall be limited to any of the following:

- a) Values for the GES have become stringent compared to the values in DAO 1990-35. In such cases, DAO 1990-35 shall apply during the grace period.
- b) New significant effluent quality parameters were identified for the sector

Such grace period shall include, but not be limited to, moratorium on the issuance of cease and desist and/or closure order, fines, and other penalties against the establishment's operations.

**SECTION 11.0 Prohibitions.** The following acts are hereby prohibited:

- 1) No effluent from any point sources shall be discharged into Class AA and SA waters.
- 2) No effluent shall cause the quality of the receiving water body to fall below the prescribed WQG in accordance with its classification.
- 3) No person shall discharge, wholly or partially, untreated or inadequately treated effluent directly into a receiving water body or land or through bypass canals and/or pumps, and other unauthorized means.
- 4) No person shall use submarine outfall or any underground conveyance as means of discharging effluent except when all of the following conditions are met:
  - a. Effluent is compliant to the GES set forth in Section 7.0 of this Order;
  - b. The receiving water body is marine water in order to protect the aesthetic requirements of shorelines; and
  - c. The needed infrastructure for sampling treated effluent is constructed above ground prior to conveyance.
- 5) No person shall build, erect, install, or use any equipment, contrivance, or any means the use of which will conceal and/or dilute an effluent and which otherwise constitute a violation of any provisions of these regulations.
- 6) No establishment or source of water pollution shall be operated without the pollution control facilities or wastewater treatment system in good order or

in proper operation.

- 7) No establishment or source of water pollution shall be operated at capacities beyond the limits of operation or capability of the wastewater treatment facility to maintain the effluent quality within the standards or pertinent conditions required by law and/or stipulated in the Wastewater Discharge Permit.
- 8) No new industrial plant with high waste load potential shall discharge into a water body where the dilution or assimilative capacity of the said water body during dry weather condition is insufficient to maintain its prescribed WQG according to its classification.

**SECTION 12.0 Fines, Damages, and Penalties.** Any person, both natural and juridical, found violating or failing to comply with any Order or Decision of the Department and/or the Pollution Adjudication Board or any provision of this Order, shall be liable under Section 28 of RA 9275.

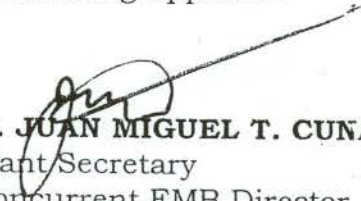
**SECTION 13.0 Separability Clause.** Any section or provision of this Order declared to be unconstitutional or invalid by a competent court, the other sections or provisions hereof shall remain to be in force.

**SECTION 14.0 Repealing Clause.** The Rules and Regulations of the National Pollution Control Commission (1978), 1982 Effluent Regulations, and DENR Administrative Orders 1990-34 and 1997-23 are hereby repealed; while DENR Administrative Order 1990-35 is modified accordingly. All other orders, issuances, rules and regulations, or parts thereof inconsistent with this Order are hereby amended, modified, or repealed accordingly.

**SECTION 15.0 Effectivity.** This Order shall take effect fifteen (15) days after its publication in a newspaper of general circulation and upon acknowledgement of receipt of a copy hereof by the Office of the National Administrative Register.

  
**RAMON J.P. PAJE**  
Secretary

Recommending Approval:

  
**ATTY. JUAN MIGUEL T. CUNA**  
Assistant Secretary  
and concurrent EMB Director

