Notification of the Industrial Estate Authority of Thailand
No. 78/2554
Re: General Rules for Wastewater Discharge into the Central Wastewater Treatment System in Industrial Estates

Whereas, it is deemed expedient to update the Notification of the Industrial Estate Authority of Thailand Re: General Rules for Effluent Discharge from Industrial Factories in Industrial Estates.

By virtue of Section 10 (4) of the Industrial Estate Authority of Thailand Act B.E. 2522 (1979), as amended by the Industrial Estate Authority of Thailand Act (No. 3) B.E. 2539 (1996) and Section 42 of the Industrial Estate Authority of Thailand Act B.E. 2522 (1979), which contain certain provisions relating to the restrictions on people’s rights and liberties which Section 29, in conjunction with Sections 32, 33, 34, 41, 42 and 43 of the Constitution of the Kingdom of Thailand so permit by virtue of provisions of law, the Governor of the Industrial Estate Authority of Thailand hereby establishes new general rules for wastewater discharge into the central wastewater treatment system in industrial estates, as follows:

Clause 1  The Notification of the Industrial Estate Authority of Thailand No. 45/2541 Re: General Rules for Effluent Discharge from Industrial Factories in Industrial Estates, dated November 11, 1998, shall be repealed.

Clause 2  In this Notification:

“Wastewater” refers to all kinds of used water that are generated from an industrial zone, commercial zone and residential zone.

“Central Wastewater Treatment System” refers to the facilities in support of the operation of the business operators in an industrial estate, for treatment of Wastewater from an industrial zone, commercial zone and residential zone.

“Wastewater Discharge System” refers to a piping system and its accessories for collection and discharge of Wastewater into the Central Wastewater Treatment System of the Business Operator.

“Storm Discharge System” refers to a piping system and its accessories for collection and discharge of stormwater.
“Business Operator” refers to an industrial operator, service operator or commercial operator permitted to operate business in an industrial estate.

Clause 3 In discharging Wastewater into the Central Wastewater Treatment System in the industrial estate, the Business Operator shall construct the Wastewater treatment system for discharge of all Wastewater into the central Wastewater drainage in accordance with the rules as follows:

(1) Wastewater treatment system shall be closed conduits;

(2) Wastewater treatment system shall be absolutely separate from the Storm Discharge System to prevent stormwater from flowing into the central Wastewater drainage as well as to prevent Wastewater from flowing into the Storm Discharge System of the industrial estate;

(3) At least 1 inspection manhole in the business premises is required prior to discharging Wastewater into the central Wastewater drainage for the purpose of wastewater sampling for Wastewater quality analysis;

(4) A holding tank of proper size to stabilize the attributes of Wastewater is required in case that Wastewater attributes are substantially changing for a certain period of time, prior to discharge into the central Wastewater drainage;

(5) A water gate is available prior to discharging Wastewater into the central Wastewater drainage;

(6) The Wastewater conduits and the central Wastewater drainage shall be connected from the inspection manhole of the business premises, and connected with the manhole provided by the IEAT. The connection must be tightly sealed to prevent water leakage.

Clause 4 The Business Operator is prohibited from discharging any substances which may affect the Wastewater discharge and treatment into the central Wastewater drainage in the industrial estate, e.g., high viscous substances, sediments or settlings causing blockage in the drainage or materials causing blockage, calcium carbide sludge, solvent, etc.

Clause 5 Wastewater to be discharged by the Business Operator into the Central Wastewater Treatment System in the industrial estate shall meet the following quality requirements:

(1) BOD (Biochemical Oxygen Demand) at 20 degrees Celsius for a period of 5 days shall not exceed 500 milligrams per liter;

(2) COD (Chemical Oxygen Demand) shall not exceed 750 milligrams per liter;

(3) The pH shall not be less than 5.5 and not exceed 9.0;

(4) TDS (Total Dissolved Solids) shall not exceed 3,000 milligrams per liter;
(5) Suspended solids shall not exceed 200 milligrams per liter;

(6) TKN (Total Kjeldahl Nitrogen) shall not exceed 100 milligrams per liter;

(7) Heavy metals of various types shall be as follows:

(a) Mercury shall not exceed 0.005 millgram per liter;

(b) Selenium shall not exceed 0.02 millgram per liter;

(c) Cadmium shall not exceed 0.03 millgram per liter;

(d) Lead shall not exceed 0.20 millgram per liter;

(e) Arsenic shall not exceed 0.25 millgram per liter;

(f) Chromium;

(1) Hexavalent Chromium shall not exceed 0.25 millgram per liter.

(2) Trivalent Chromium shall not exceed 0.75 millgram per liter.

(g) Barium shall not exceed 1.0 millgram per liter;

(h) Nickel shall not exceed 1.0 millgram per liter;

(i) Copper shall not exceed 2.0 milligrams per liter;

(j) Zinc shall not exceed 5.0 milligrams per liter;

(k) Manganese shall not exceed 5.0 milligrams per liter;

(l) Silver shall not exceed 1.0 millgram per liter;

(m) Total iron shall not exceed 10.0 milligrams per liter.

(8) Sulfide compared to Hydrogen sulphide (H2S) shall not exceed 1 milligram per liter;

(9) Cyanide compared to Hydrogen cyanide (HCN) shall not exceed 0.2 milligram per liter;

(10) Formaldehyde shall not exceed 1 milligram per liter;

(11) Phenols Compound shall not exceed 1 milligram per liter;

(12) Free Chlorine shall not exceed 1 milligram per liter;

(13) Chloride as Chlorine shall not exceed 2,000 milligrams per liter;
(14) Fluoride shall not exceed 5 milligrams per liter;

(15) Pesticide shall not be found;

(16) Temperature shall not be higher than 45 degrees Celsius;

(17) Color shall not be undesirable;

(18) Odor shall not be undesirable;

(19) Oil and grease shall not exceed 10 milligrams per liter;

(20) Surfactants shall not exceed 30 milligrams per liter.

Clause 6  The inspection of Wastewater quality as specified in Clause 5 shall be based on the methods as approved by the Ministry of Industry or the Ministry of Natural Resources and Environment. If no method is specified by such agency, the inspection method shall be based on the Environmental Engineer Association of Thailand’s Water and Wastewater Analysis Handbook or the Standard Methods for the Examination of Water and Wastewater which are jointly formulated by the American Public Health Association, the American Water Work Association and the Water Environment Federation of the United States of America.

Measurement or analysis shall be performed by a licensed analysis laboratory which is qualified to conduct measurement or analysis of properties of Wastewater in the specified parameters.

Clause 7  The requirements on quality of Wastewater to be discharged into the Central Wastewater Treatment System in an industrial estate shall be in compliance with this Notification, unless otherwise specified in the environmental impact assessment report approved by the EIA Expert Review Committee of the Office of Natural Resources and Environmental Policy and Planning.

If any industrial estate has made available the Wastewater discharge database, the requirements on quality of Wastewater discharged into the Central Wastewater Treatment System may be specified different from those specified herein, subject to the conditions as prescribed in the environmental impact assessment report approved by the EIA Expert Review Committee of the Office of Natural Resources and Environmental Policy and Planning and with the IEAT’s permission.

Clause 8  In the event that the requirement on quality of Wastewater to be discharged into the Central Wastewater Treatment System in an industrial estate are not in accordance with those as prescribed by the IEAT or the environmental impact assessment report approved by the EIA Expert Review Committee of the Office of Natural Resources and Environmental Policy and Planning, the Business Operator shall construct an initial Wastewater treatment system with
sufficient capacity and efficiency to improve the Wastewater quality of its business premises to meet the requirements on quality of Wastewater as prescribed by the IEAT or as specified in the environmental impact assessment report, prior to discharging all Wastewater into the central Wastewater drainage.

This Notification shall come into effect forthwith.

Notified on the 23rd day of November B.E. 2554 (2011).

- Signature -

(Mrs. Monta Pranootnorapal)

Governor of the Industrial Estate Authority of Thailand