

PREFACE

This guideline is intended to assist industrial estates and locators in managing wastewater. It provides the laws that govern wastewater generation and presents the regulatory requirements that should be undertaken to ensure compliance with the Philippine Clean Water Act of 2004 (RA 9275) and its Implementing Rules and Regulations (DENR AO 2005-10).

The development of this guideline was made possible through the initiative of the Philippine Economic Zone Authority (PEZA), in partnership with the German Development Cooperation (GTZ). Assistance was provided by the Department of Environment and Natural Resources - Environmental Management Bureau DENR - EMB and the Laguna Lake Development Authority (LLDA).

ACRONYMS

BR	Board Resolution
CWTF	Centralized Wastewater Treatment Facility
DAO	DENR Administrative Order
DENR	Department of Environment and Natural Resources
ECC	Environmental Compliance Certificate
EMB	Environmental Management Bureau
ESG	Environmental Safety Group
FISD	Fire and Industrial Safety Division
IRR	Implementing Rules and Regulations
LLDA	Laguna Lake Development Authority
PEZA	Philippine Economic Zone Authority
RA	Republic Act
SMR	Self-Monitoring Report

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I. INTRODUCTION

Industrial activities contribute to the deterioration of the environment and to the loss of natural resources. Wastewater from industries does not only contain organic wastes but in some instances have heavy metals and hazardous contaminants that pose significant threats to health of aquatic life and the human population.

With the passage of the Philippine Clean Water Act of 2004 (Republic Act 9275), wastewater quality management systems in economic zones have to be established and institutionalized to ensure compliance by locator enterprises and industrial estates/operators of centralized wastewater treatment plants.

II. SCOPE

This Guideline on Wastewater Management is applicable to both public and private economic zones under the jurisdiction of PEZA. The Guideline is consistent with the provisions of RA 9275 and other relevant issuances.

Documents attached to this Guideline shall be for the use of officials and personnel of the Philippine Economic Zone Authority (PEZA), industrial estates, and locator enterprises in PEZA-registered economic zones.

III. DEFINITION OF TERMS

Locator enterprise shall refer to an enterprise that is located or sited within the geographic boundaries of an economic zone, ecozone export enterprise, ecozone domestic enterprise, ecozone pioneer enterprise, ecozone free trade enterprise, ecozone utilities enterprise, ecozone facilities enterprise, ecozone service enterprise, and ecozone tourism enterprise.

Ecozones or Special Economic Zones shall refer to selected areas with highly developed or which have the potential to be developed into agro-industrial, industrial, tourist, recreational, commercial, banking, investment and financial centers whose metes and bounds are fixed or delimited by Presidential Proclamations. An ecozone may contain any or all of the following: industrial estates (IEs), export processing zones (EPZs), free trade zones, and tourist/recreational centers.

Ecozone Developer shall refer to a business entity within the ecozone duly registered with and/or licensed by the PEZA to develop, operate, and maintain an ecozone.

Effluent quota refers to the maximum allowable pollution load that an establishment can discharge without affecting the present state or condition of the water body.

Private Economic Zone shall refer to an ecozone developed, operated and maintained by a private developer.

Public Economic Zone shall refer to an ecozone developed, operated and maintained by PEZA, (i.e. Bataan Economic Zone, Baguio City Economic Zone, Cavite Economic Zone, and Mactan Economic Zone)

Centralized Wastewater Treatment Facility refers to a facility designed to treat both domestic and/or process wastewater generated from individual locator within the industrial estate.

Pre-Treatment Standards shall refer to the prescribed effluent standards imposed by ecozones for locators that are interconnected to the CWTF based on the capacity and design efficiency of the CWTF.

Wastewater means waste in liquid state containing pollutants.

IV. GENERAL REQUIREMENTS FOR ECONOMIC ZONES GENERATING WASTEWATER

Ecozone developers generating wastewater must comply with the following requirements:

A. Permitting

1. Secure an Environmental Compliance Certificate (ECC) from the DENR-Environmental Management Bureau (DENR-EMB).
2. For ecozones within LLDA jurisdiction, secure LLDA Clearance.
3. Secure Wastewater Discharge Permit from the DENR-EMB/LLDA and pay the prescribed fees. All ecozones are required to pay the administrative fee and variable fee for the liquid waste discharges of the entire ecozone.

B. Provision of a CWTF

1. Install operate and maintain a suitable centralized wastewater treatment facility (CWTF) for the treatment of wastewater discharged by locator enterprises.
2. Issue a Certificate of Wastewater Interconnection and/or Permit to Discharge to the locator enterprises that are connected to the CWTF.
3. Ensure compliance of ecozone effluent(s) with the prescribed Effluent Standards of the DENR.

C. Pre-treatment Standards and Mandatory Connection to CWTF

1. Develop pre-treatment standards for compliance of locator enterprises. The Deed of Restriction or Contract/Agreement between the economic zone and locator enterprise must clearly state the minimum effluent quality that must be discharged by the locator enterprise to the CWTF as well as compliance with pertinent environmental requirements of the DENR/LLDA.

2. Require locator enterprises to connect to existing CWTF as mandated by Rule 8.3 of DAO 2005-10 (Implementing Rules and Regulations of Philippine Clean Water Act of 2004) and LLDA BR 106, series of 1999.
3. Maintain a file of the design of individual pre-treatment facilities proposed and used by locator enterprises considering the set internal pre-treatment standards.

D. Monitoring and Reporting

1. Assign a DENR-EMB/LLDA Accredited Pollution Control Officer / Environmental Management Officer, or his authorized representative, to supervise operation of the CWTF and monitor effluents from locator enterprises.
2. Provide information necessary to characterize wastewater, as may be required by DENR and/or PEZA.
3. Comply with the Self-Monitoring Reporting requirements of the DENR-EMB/LLDA/PEZA.

E. Other Requirements

1. Ensure authenticity, validity, and completeness of all documents (e.g. permits, contracts, etc.) submitted to PEZA and DENR
2. Comply with existing laws, rules and regulations on the management of wastewater,

V. GENERAL REQUIREMENTS FOR ECONOMIC ZONE LOCATOR ENTERPRISES GENERATING WASTEWATER

Economic zone locator enterprises generating wastewater must comply with the following requirements:

A. Permitting

1. Secure an ECC from the DENR-Environmental Management Bureau (DENR-EMB) Regional Office whenever applicable.
2. Secure LLDA Clearance for ecozone locator enterprises located within the jurisdiction of LLDA whenever applicable.
3. Secure Certificate of Wastewater Interconnection from the ecozone once wastewater discharge line is connected to the CWTF and submit the same to the DENR-EMB/LLDA for securing exemption from the Discharge Permit requirement.

B. Connection to CWTF

1. All locator enterprise are required to connect to the centralized wastewater treatment facility as stipulated in Rule 8.3 of DAO 2005-10 (IRR of the Philippine Clean Water Act of 2004).

2. Locators with toxic and deleterious components in their discharge shall have a pre-treatment facility to treat their wastewater and meet the pre-treatment standards set by the ecozone.
3. Monitor effluent quality and ensure compliance with the prescribed pre-treatment standards of the ecozone.

C. Monitoring and Reporting

1. Assign a DENR-EMB/LLDA accredited Pollution Control Officer / Environmental Management Officer, or his authorized representative, to monitor effluent and comply with the environmental requirements of DENR/LLDA/PEZA.
2. Provide information necessary to characterize wastewater, as may be required by the ecozone and/or PEZA.
3. Submit Self-Monitoring Reports to the DENR-EMB/LLDA/PEZA. For locators of public economic zones, submit a copy of the received SMR to the FISD office.

D. Other Requirements

1. Ensure authenticity, validity, and completeness of all documents (e.g. permits, contracts, etc.) submitted to PEZA and DENR
2. Comply with existing laws, rules and regulations on the management of wastewater.

E. Request for exemption on mandatory connection

1. Locator enterprises may request for exemption on mandatory connection only if there is no available wastewater pipeline to connect them to the CWTF. However, exempted locators will be required to connect to the CWTF once the wastewater pipeline is available.
2. Locator enterprises requesting for exemption must meet the following:
 - a. Provide appropriate treatment for domestic and/or industrial wastewater;
 - b. Allowed by the Deed of Restriction or Contract/Agreement between economic zone and locator enterprise; and,
 - c. Coordinate directly with the DENR-EMB/LLDA in securing their Discharge Permit and ensuring compliance to the Philippine Clean Water Act of 2004.

VI. MANAGING WASTEWATER

- A. Conservation and recycling of water by locators and ecozone developers is encouraged to minimize the volume of wastewater that will be generated.
- B. A rated payment scheme for sewer connection and wastewater treatment shall be developed by ecozones that will consider the water consumption, wastewater volume and effluent quality generated by a locator.

- C. Waste minimization and cleaner production techniques shall be implemented by locators and ecozone developers to reduce wastewater such as but not limited to:
- Careful installation of water supply lines to minimize leakage
 - Installation of water-conserving or saving technologies and fixtures
 - Recycling treated effluent for cooling water, lawn watering or toilet flushing.
- D. Submit Wastewater Management Plan to PEZA-ESG, for locators in private ecozones, and PEZA-FISD, for locators in public ecozones.

VII. CONNECTING TO THE CWTF AND PRE-TREATMENT OF WASTEWATER

A. Connecting to the CWTF

1. All locator enterprises shall utilize the common wastewater discharge pipeline provided by the ecozone and shall not directly discharge untreated wastewater to water bodies.
2. The locator shall secure approval from the ecozone before connecting its wastewater pipeline to the common wastewater pipeline of the ecozone. The minimum requirements for approval include the submission of plumbing plans signed by a Sanitary Engineer/Master Plumber and computation of wastewater volume. Approval to connect to the wastewater pipeline in public ecozones is reflected by the issuance of a Certificate of Wastewater Interconnection.
3. An evaluation of the plumbing plans and ocular inspection shall be conducted by the ecozone on the appropriateness of the locator's wastewater pipeline prior to the issuance of the Certificate of Wastewater Interconnection. The locator shall ensure that the wastewater pipeline is correctly connected to the common wastewater pipeline of the ecozone to prevent seepage.

B. Pre-Treatment of Wastewater

1. An internal pre-treatment standard shall be imposed by the ecozone to the locators. The internal discharge standards of the ecozone shall be dependent on the capacity and design criteria of the CWTF.
2. Whenever necessary, appropriate wastewater treatment equipment must be installed by the locator before connecting to the common wastewater discharge pipeline of the ecozone to conform to the internal pre-treatment standards set by the ecozone.

VIII. SECURING WASTEWATER DISCHARGE PERMIT

Rule 14 of implementing rules and regulations of RA 9275 states that any person that discharges, in any manner, wastewater into Philippine waters and/or land shall secure a wastewater discharge permit from the DENR.

A. Who May Apply for a Wastewater Discharge Permit

1. The Wastewater Discharge Permit issued by the DENR/LLDA is required for all owners or operators of CWTF that discharge effluents into a water body, as required in Rule 14.9 of RA 9275. The Discharge Permit application shall be filed with the EMB Regional Office or to the LLDA.
2. Locator enterprises that are connected and discharging all effluent to the CWTF are no longer required to secure the Discharge Permit from the DENR or the LLDA.
3. A Certificate of Wastewater Interconnection or Permit to Discharge issued by the ecozone to a locator connected to the CWTF shall be presented to DENR-EMB / LLDA by the locator to secure exemption from securing the Discharge Permit.
4. Locator enterprises that are not connected to the CWTF of the ecozone shall be required to secure the Discharge Permit from the DENR or LLDA for its own facility. The ecozone shall not be held responsible for any violations or penalties that may be incurred by the locator enterprise in case of non-compliance of its own effluent with the Effluent Standards. However, the ecozone may require said locator to provide additional environmental safeguards as it may deem necessary and shall monitor other environmental aspects of the said locator.

B. Wastewater Discharge Permit Fee

1. The wastewater discharge fee shall be paid by the operator of the CWTF, pursuant to Rule 13.9 of RA 9275.
2. Locators that are connected to the CWTF are exempted from paying the wastewater discharge fee to the DENR-EMB / LLDA. However, a sewer connection fee shall be imposed by the ecozone to the locator for the wastewater treatment services.

C. Processing of Wastewater Discharge Permit Fee

1. Ecozones are required to submit the Discharge Permit application to the DENR EMB Regional Offices except for ecozones located within the jurisdiction of the LLDA. As embodied in Republic Act 4850, LLDA jurisdiction covers the provinces of Rizal and Laguna, cities of San Pablo, Pasay, Caloocan, Quezon, Manila, Marikina, Pasig, Taguig, Muntinlupa and Tagaytay, towns of Tanauan, Sto. Tomas and Malvar in Batangas province, towns of Silang and Carmona in Cavite province, town of Lucban in Quezon province, and town of Pateros in Metro Manila. Ecozones located in the Laguna de Bay Region are required to secure the Discharge Permit from the LLDA.
2. The DENR/LLDA issues only one Discharge Permit for one ecozone even if there are multiple outlets or outfalls provided that it meets the following criteria:
 - The outfalls are owned and managed by the ecozone.
 - The outfalls are located in a contiguous geographical area
 - The outfalls discharge into a common body of water.
3. Outfalls from a single ecozone but are channeled in different water bodies abutting the ecozone are required to secure a Discharge Permit for each outfall.

4. Ecozone developers must pay the administrative and load-based fees prescribed by the Implementing Rules and Regulations of RA9275 and other DENR/LLDA issuances related hereto.

IX. SELF-REGULATION, MONITORING AND REPORTING

A. Monitoring by Ecozone

1. Economic zone developers who owns / operates the CWTF are required to establish an influent and effluent monitoring program, undertake monthly monitoring and sampling of effluents from the CWTF, and submit monitoring reports to DENR-EMB/LLDA on a quarterly basis as part of the Self-Monitoring Report (SMR) requirement. A copy of the submitted SMR should be submitted to PEZA-ESG.
2. Volume and quality of abstracted water and wastewater generated shall be recorded for purposes of measuring the cumulative net waste load from the ecozone, including those from the locators.

B. Monitoring by Locators Connected to the CWTF

1. Locators connected to the CWTF shall be required to submit quarterly monitoring reports of volume and quality of abstracted water to the ecozone for reference of the ecozone in calculating the net waste load from the entire ecozone and in validating monitoring information on the CWTF operation.
2. Locator enterprises shall allow the ecozone through its FISD (public ecozones) and developer's/zone administration's Environmental Management Group (private ecozones) to conduct monitoring and sampling of effluent.
3. Split sampling of wastewater may be conducted by the locator enterprise during the monitoring of the locator's effluent by the ecozone/PEZA. The results of the locator monitoring shall be submitted to DENR-EMB/LLDA and PEZA and may be used by the ecozone in computing the wastewater treatment fees.

C. Submission of SMR

In order to promote self-regulation and environmental responsibility among locators and the ecozone, the following procedures are prescribed in the submission of SMR:

1. Following the prescribed format of the DENR/LLDA, each locator connected to the CWTF shall submit the SMR to the ecozone for counterchecking and validation of information.
2. Each ecozone shall determine a reasonable prescribed period or deadline of quarterly submission of SMRs by locators, in consideration of the deadline prescribed by the DENR/LLDA/PEZA to the ecozone.

3. The ecozone, through its Environment Office, shall conduct evaluation of the SMR, particularly the reported volume and quality of wastewater, pre-treatment and maintenance measures, and other related information on waste generation and management.
4. The information provided by the locators to the ecozone will be important to the overall environmental management of the ecozone. Locators in public ecozones which fail to provide pertinent information in the SMR or submit the SMR shall be notified immediately by the FISS in writing.
5. The ecozone shall be entitled, as part of its self-monitoring system, to set deadlines for submission, conduct inspection of the locator facility, and impose stricter penalties or sanctions against locators for failure to comply with this guideline,
6. Upon confirmation of the soundness of information, the ecozone shall then prepare a summary of the status of compliance of each ecozone locator.
7. The summary of status of compliance together with the SMR of the ecozone shall be submitted to PEZA for evaluation.

D. Monitoring by PEZA

1. The PEZA shall conduct annual environmental audit of ecozones. The environmental audit shall review the effectiveness of environmental management by the ecozones and determine whether the ecozone and its locators are complying with all environmental regulations and performance standards. The environmental audit shall not be undertaken as a regulatory exercise, but rather, as PEZA's system of assisting ecozones and locators in complying with environmental regulations.
2. Findings or non-conformance shall be reported and discussed between PEZA, the ecozone, and the subject locators. A program of environmental compliance shall be required by PEZA from the ecozone/locator, including set timelines.
3. If upon evaluation of PEZA and after a maximum period of one year, certain locators are still found to be continuously not complying with the environmental requirements, the PEZA, with concurrence of the ecozone, shall refer the violation to the DENR/LLDA for appropriate action.

E. Monitoring by DENR/LLDA

1. The DENR through EMB and LLDA enforce the Philippine Clean Water Act of 2004. They conduct regular monitoring of the CWTF to check its compliance to the effluent standards. On the other hand, monitoring of ecozone locators' wastewater discharge are occasionally conducted by DENR-EMB/LLDA (i.e. in case of complaints raised to their agency) to check and verify their compliance to the zone's pretreatment standards.
2. The PEZA Zone Office shall facilitate the entry of DENR/LLDA inspectors inside the ecozone for purposes of, but not limited, to risk assessment and monitoring of the ecozone premises.

The PEZA-ESG shall be provided copies of the results of such inspections, simultaneously with submission of findings to the PEZA developer/locators inspected.

X. PROHIBITED ACTS

A. Ecozone developers and locators shall be subject to fines and/or administrative sanctions for the following prohibited acts:

1. Failure of locators connected to the CWTF to comply with the internal Effluent Standards sets by the CWTF operator/ecozone;
2. Use of bypass canals/channels to discharge untreated wastewater into the environment;
3. Failure to secure permits/clearances from DENR –EMB /LLDA;
4. Failure to submit quarterly Self-Monitoring Reports;
5. Misrepresentation and falsification of permits/license;
6. Failure to appoint a Pollution Control Officer;
7. Refusal to allow entry, inspection and monitoring of any authorized PEZA and/or DENR/LLDA personnel; and,

XI. SANCTIONS, FINES AND PENALTIES

A person or entity who shall violate, disobey, refuse, omit or neglect to comply with any of the provisions of these guideline shall be guilty of misdemeanor and punishable with sanctions, fines and penalties prescribed in the following sections.

1. Locator enterprises connected to the CWTF and whose effluents fail to conform with the pre-treatment standards prescribed by the ecozone shall be required to institute remedial measures within thirty (30) days or within a reasonable period approved by the ecozone developer.
2. The ecozone locator enterprise shall be accountable to the ecozone for the payment of surcharge fees for non-compliance with the pre-treatment standards.
3. Non-compliance of the effluent of the CWTF with the prescribed Effluent Standards of RA9275 shall compel DENR-EMB/LLDA to impose fines/penalties to the ecozone pursuant to the provisions of RA9275.
4. The following fines and sanctions shall be imposed for prohibited acts committed by ecozones or locators:

Violation	1st Offense	2nd Offense	3rd Offense
Failure of locator to comply with internal Effluent Standards	Warning by ecozone	PhP500 per parameter /day	Report to DENR-EMB/LLDA for imposition of legal action Revocation of PEZA registration
Failure of locator to connect	Warning by PEZA	PhP10,000 per day	Revocation of PEZA

Violation	1 st Offense	2 nd Offense	3 rd Offense
to existing CWTF			Registration
Discharge of untreated wastewater	Warning by PEZA	PhP10,000 – 50,000 per day	Report to DENR-EMB/LLDA for imposition of legal action Revocation of PEZA registration
Failure to secure permits from DENR/LLDA	Warning by PEZA	PhP10,000 per day	PhP30,000 per day
Failure to submit Self-Monitoring Report <ul style="list-style-type: none"> • ecozone • locator 	Warning by PEZA Warning by ecozone	PhP10,000 per day	Report to DENR-EMB/LLDA for imposition of legal action
Misrepresentation/falsification of permits/clearances	PhP5,000	PhP10,000 per day	Revocation of PEZA Registration
Failure to appoint a PCO	Warning by PEZA	PhP5,000	PhP10,000

5. The schedule of fines and sanctions shall be reviewed by PEZA in consultation with ecozones and locators.

XII. EFFECTIVITY

This Guideline shall be effective starting on:

- a. Phase 1: 15 July 2009 at the public ecozones;
- b. Phase 2: 15 July 2010 at private ecozones outside LLDA jurisdiction;
- c. Phase 3: 15 July 2011 at private ecozones within LLDA jurisdiction; and,

and shall remain in force until repealed by another coherent issuance.

ANNEX

- A. Sample format Certificate of Interconnection
- B. Sample format Permit to Discharge

ANNEX A

Sample Format of Initial Certificate of Interconnection

CERTIFICATE INTERCONNECTION

This is to certify that _____ (name of company) _____, located at _____ (address) _____, after complying with all the requirements for sewer tapping and the conduct of ocular inspection, was allowed to connect their wastewater (domestic and process wastewater) to the common discharge line to the Centralized Wastewater Treatment Facility of _____ (name of ecozone) _____, subject to the following conditions:

1. Wastewater effluent from the _____ name of company _____ should pass the internal Effluent Standards / Pre-treatment Standards prescribed by _____ name _____ of ecozone _____.
2. Maintain only _____ (number of locator tapping points to the ecozone's wastewater pipeline) connection point/s located at _____ (coordinates of locator tapping points to the ecozone's wastewater pipeline) _____.
3. Wastewater should be discharged only to the common wastewater discharge pipeline as provided in the ecozone.
4. The Annual Certificate of Interconnection / Permit to Discharge must be secured.

Issued this ___ day of _____, 2008.

Recommending Approval:

Approved by:

ANNEX B

Sample Format of Permit to Discharge or Annual Certificate of Interconnection

PERMIT TO DISCHARGE / ANNUAL CERTIFICATE OF INTERCONNECTION

This is to certify that _____ (name of company) _____, located at _____ (address) _____, after complying with all the requirements for sewer tapping and the conduct of ocular inspection, was allowed to connect their wastewater (domestic and process wastewater) to the common discharge line to the Centralized Wastewater Treatment Facility of _____ (name of ecozone) _____ on _____ date _____, subject to the following conditions:

5. Wastewater effluent from the _____ name of company _____ should pass the internal Effluent Standards / Pre-treatment Standards prescribed by _____ name _____ of ecozone _____.
6. Concentration of toxic and deleterious substances in the effluent shall conform to the standards prescribed in DENR Administrative Order 35 for Class __ waters before discharging into the Centralized Wastewater Treatment Facility for final treatment.
7. A quarterly Self-Monitoring Report (SMR) shall be submitted to _____ (name _____ of ecozone) _____ through the Environmental Management Group on or before _____ date _____ of every quarter.
8. The designated Pollution Control Officer, _____ name of PCO _____, shall ensure the compliance of the facility to the environmental regulations, policies and regulations of the DENR and PEZA.
9. Unless revoked for failure to comply with any of the conditions stated herein, this Certificate of Interconnection shall remain valid for a period of one (1) year.

Issued this __ day of _____, 2008.

Recommending Approval:

Approved by:
