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# LEGAL REVIEW OF THE FULFILLMENT OF WASTEWATER QUALITY STANDARDS IN THE HOTEL INDUSTRY IN CIREBON CITY

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**KEYWORDS**
Cirebon City; Hospitality Industry; Standardization of Wastewater Quality Standards; Water Pollution Control

## ABSTRACT

This study aims to control water pollution by conducting observations on the hotel industry in Cirebon City regarding the implementation of compliance with the standardization of wastewater quality standard parameters according to Ministerial Regulation No. P 68 of 2016. Research methods were conducted openly through interview techniques regarding monitoring and management of wastewater produced by the Hospitality Industry in Cirebon City. The results of the study identified that from the hotel industry in the city of Cirebon which is the object of research, the quality standard of wastewater produced exceeds the standardization of meeting quality standards so that there is still a risk of water pollution. The handling can be this problem by conducting strict monitoring by the environmental service and providing knowledge or information related to the management of wastewater quality standards properly so that the content of the waste produced does not endanger the flow of rivers and seas in the city of Cirebon. The approach that must be taken in order to understand and be able to maximize the treatment of liquid waste with a wastewater management plant (IPAL) is to consult the Environmental Service in order to get direction to cooperate with third parties (outsourcing). Observations also state that there is still one hotel that does not use IPAL and in the hotel's activities, the waste is purely dirty and pollutes the river flow in Cirebon City.

## INTRODUCTION

As living beings, humans need a healthy environment for their survival, so one of the absolute rights that every Indonesian citizen must receive is to be physically and mentally prosperous, such as getting a good and healthy environment by getting health services, in accordance with the provisions of the 1945 Constitution of the Republic of Indonesia Pasal 28h ayat 1.

Human activities in the utilization of natural resources and the environment every day often produce waste substances from their daily activities which can be called waste that can increase the content of pollutants in the water, this pollutant content is a substance or material added to the environment that is unwanted or that cannot be accepted by the environment. These substances can cause pollution problems in the environment, if these environmental

conditions cannot neutralize materials or substances containing pollutants, environmental pollution will occur (Standard, 2017). Therefore, the fulfillment of the Wastewater Quality Standard, which is a measure of the limit or level of pollutant elements that are tolerated in Wastewater that will be discharged or released into the water and soil media from a business and/or activity, is very important (Riskyanto, 2019).

Therefore, every business actor who has certain criteria is required to make an IPAL (Instalasi Pengelolaan Air Limbah) to filter and neutralize water or waste substances that contain substances that can cause environmental pollution (Fauzia & Siska, 2021). In Government Regulation number 22 of 2021 concerning the Implementation of Environmental Protection and Management pasal 1 ayat (28) (Tumpu et al., 2023).

Factors that can exceed wastewater quality standards in the environment by human activities, namely the entry of living things, substances, energy, and other components, have been stipulated in pasal 1 ayat 31 concerning the protection and management of water quality is a systematic and integrated effort to maintain water quality And for the rules governing wastewater quality standards themselves are regulated in the Minister of Environment and Forestry Regulation No.68 of 2016 (Tuhu Agung & Winata, 2010).

Supporting the economy of a city is the large number of hotel establishments in the city of Cirebon, as the main role in the impact of environmental sustainability in all its activities, namely in the management of wastewater and garbage generated by hotel hotels in the city of Cirebon with not a small amount of waste sources generated classified as non-infectious waste which is domestic waste from kitchen activities, Therefore, to maintain the environment in Indonesia, it is necessary to deal with problems in the state of the environment such as deterioration or degradation aimed at reducing environmental damage due to pollution of the hotel industry or waste disposal that does not meet technical and health requirements (Busyairi et al., 2020). Wastewater from laundry, kitchen, and café activities is channeled to gray water septic tanks. While wastewater from the activities of the campus or bathroom is channeled to the black water septic tank (Surabaya, 2019).

Hotels with environmentally friendly themes, namely eco-hotels, aim to participate in saving the environment by means of water and energy use efficiency systems, managing wastewater disposal or wastewater utilization systems, waste recycling programs, and employee empowerment programs to protect the environment as an effort to reduce environmental pollution (Marliani, 2015) & (Herlambang, 2006) .

The waste produced is domestic waste or household waste, but the waste produced by the hospitality industry is more in the form of liquid waste which is sometimes lost directly dumped into the river channel in the city so it can be very dangerous because of the possibility of hazardous materials or waste content that microorganisms cannot digest (Suardana et al., 2023).

Therefore, the purpose of this study is to determine how well the hotel industry in Cirebon meets the wastewater quality standards set by the government.

Based on the description above, we focus in this study to find out the issue of how the compliance of the hotel industry in Cirebon City related to the standardization of parameters for meeting the quality standards of liquid waste has been in accordance with the regulation of the minister of environment and forestry (2016) No.68 household quality standards.

## RESEARCH METHODS

The method used to optimize this research process is a qualitative research method based on the accuracy of observation data to obtain accurate data. The techniques applied in the process of collecting and managing data are in the form of object observation, open interviews, and filling out questionnaires (Ratnaningtyas et al., 2023). In accordance with the formulation of the problem stated the focus of the research is to know and observe the laboratory test of the quality standards of liquid waste in six hotel objects in Cirebon City in accordance with Permen-LKH NO 68 of 2016 concerning domestic wastewater quality standards.

## RESULTS AND DISCUSSION

### Level of Compliance of the Hospitality Industry in Cirebon City with Domestic Wastewater

The level of compliance in four reference hotel industries in the city of Cirebon, each hotel shows different results related to wastewater management, we will present a compliance table regarding domestic wastewater management in the hotel industry, this table contains a number of criteria for the compliance of the hotel industry with domestic wastewater management. The criteria include important aspects that reflect sustainable wastewater management practices (Panjaitan et al., 2023).

**Table 1**
**Hospitality Industry Compliance Criteria Related to Wastewater Management**

| No | Specifications | Criteria |
|---|---|---|
| 1 | Water Pollution Control | 1. The obligation of business actors to treat the wastewater they produce in accordance with the provisions of pasal 130 of Government Regulation 22 of 2021.<br>2. The obligation of business actors to have a wastewater treatment system in accordance with pasal 17 ayat (1) of the Minister of Environment and Forestry Regulation 5 of 2021.<br>3. 3. Obligation of business actors to have technical recognition of compliance with relevant wastewater quality standards. Pasal 133 PP 22 of 2021, pasal 3 ayat (1) Minister of Environment and Forestry Regulation 5 of 2021.<br>4. The obligation of business actors to meet the requirements for technical compliance with waste quality standards and standards. technical competence of human resources in accordance with pasal 138 of PP 22 of 2021, and pasal 21 of the Minister of Environment and Forestry Regulation of 2021.<br>5. Obligation of business actors to conduct wastewater monitoring in accordance with pasal 144 of Government Regulation 22 of 2021. |

Based on data from field observations from the six hotels in the city of Cirebon, namely Hotel B, Hotel O, Hotel D, Hotel S, Hotel L, and Hotel R. In accordance with PP No. 22 of 2021 and Permen LHK No. 5 of 2021 states that Hotel S has met the compliance criteria in terms of documents and management. The results of Hotels B and L are almost in accordance with the compliance criteria because they have provided indicators that can optimize the treatment of domestic wastewater generated from the operation of these hotels. However, Hotel B does not maximize the treatment and monitoring of wastewater produced so there is still a slight risk of water pollution in the surrounding environment. Then the results of research on Hotel O and Hotel D show that the two hotels have not met the criteria for compliance with applicable regulations because the IPAL owned by the two hotels is not considered to be managed and does not carry out regular checks on wastewater generated from the hotel's activities so that it can pose a great risk to water pollution in the surrounding environment (Kurniajati, 2018). The research results from Hotel R state that Hotel R does not meet the criteria for compliance with applicable regulations, because the hotel does not have an IPAL, and the waste generated by the hotel is directly discharged into the city irrigation channel so that it is at great risk of water pollution (Kapindha, 2013).

The wastewater quality standard is the quality that wastewater produced by companies or businesses must meet. These standards include certain parameters, such as pollutant content, acidity, temperature, and other relevant parameters.

Correct sampling is necessary to obtain good wastewater analysis results. the best way to sample is to use a good approach with the average concentration of several points that have been selected, or by taking samples at equalization. Wastewater sampling includes several aspects, namely sampling location, time and frequency, collection method, necessary equipment, and storage and preservation of samples.

**Table 2**
**Wastewater Quality Standard**

| Parameters | Channel | Maximum Level |
|---|---|---|
| pH | - | 6-9 |
| BOD | mg/L | 30 |
| COD | mg/L | 100 |
| TSS | mg/L | 30 |
| Oils and Fats | mg/L | 5 |
| Amoniak | mg/L | 10 |
| Total Coliform | Quantity/100ml | 3000 |
| Debit | L/person/day | 100 |

Source Regulation of the Minister of Environment and Forestry Number P.68/Menlhk-Setjen/2016

**Table 3**
**Observation Results of Laboratory Tests of wastewater from the four Hotels in Cirebon City**

| Hotel Object | Parameters | | | | | | | | Description |
|---|---|---|---|---|---|---|---|---|---|
| | pH | BOD | COD | TSS | Oils & Fats | Amoniak | Total Coliform | Debit | |
| Hotel B | 7,48 | 33,32 | 104,14 | 56 | 4 | 16 | 6300 | - | TMS |
| Hotel O | 6,76 | 44 | 103 | 48 | - | 0,56 | >11000 | - | TMS |
| Hotel D | 6,74 | 49 | 109 | 28 | - | 0,45 | >11000 | - | TMS |
| Hotel S | 7,36 | 19.45 | 82.57 | 22 | 0.80 | 0.44 | 700 | - | MS |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Hotel L | 6.65 | - | 27.42 | 16 | - | - | - | - | TMS |
| Hotel R | - | - | - | - | - | - | - | - | TMI |

Description:
MS: Meets Standard
HMS: Almost Meets Standard
TMS: Does Not Meet Standard
TMI: Does not have Ipal

The laboratory test results above show that there are still many hotels that have not met the quality standards that have been regulated in PP 22 of 2021, PERMEN LHK 5 of 2021, and PERMEN LHK P68 of 2016. For hotels that are included in the description of Qualified, Not Qualified, it is recommended that they always consult with experts or competent institutions in wastewater analysis to ensure that the fulfillment of wastewater quality standards is in accordance with applicable regulations, and for hotels that do not have an IPAL, it is urged to make it otherwise the applicable sanctions from the relevant agencies will be lowered (Setiyono, 2009).

**Handling of Wastewater Management that exceeds the Standard**

The environment office has a major role in supervising the implementation of environmental management and monitoring in accordance with its main tasks as a regional agency business and assisting the duties of the regional head.

Supervision carried out by the local government and the community results in the processing carried out by the hotel industry still has minimal awareness regarding environmental sustainability. The factor is the supervision of the environmental service which is passive and reactive so there is a lack of coordination between related agencies. therefore the level of awareness and supervision of the environmental service is a very important factor as well as handling wastewater management that exceeds the standard.

Handling of liquid waste management in the hotel industry that exceeds quality standards can be done from various aspects including the following:

a. Handling the management of wastewater that exceeds quality standards in the legal aspect involves the enforcement of existing regulations, this can be in the form of, fostering legal sanctions in the form of administrative sanctions or written warnings for hotels or individuals responsible for wastewater pollution. The government can impose fines, temporary or permanent closure of sewers used by the hospitality industry against facilities that violate the rules, and even criminal legal action against serious violations. In addition, a strict licensing and supervision system is also in place to ensure that all wastewater management complies with set standards.
b. Technical handling can be done as follows:
    a) Liquid waste treatment with physical techniques, namely filtering the separation of disposal between sand and solid wastewater, then settling and flotation which serves to remove pollutant particles to the surface of wastewater.
    b) Treatment of liquid waste with Biological techniques, namely by involving Aerobic bacteria to decompose organic matter.

c) Treatment by disinfection, which is to reduce microorganisms in liquid waste by adding chemical compounds according to the required dose so as not to endanger the environment.
d) Liquid waste treatment with chemical techniques, namely the process of neutralization, gas transfer, and coagulation by giving positive chemicals, to change the degree of acidity (pH) of wastewater. Liquid waste treatment can also be carried out with the principles that the hotel industry must have for water pollution control, namely reusing waste generated from hotel industry activities for the benefit of further industries without reducing the quality of the wastewater.

The hotel is required to conduct regular monitoring of the quality of wastewater produced and report it to the local Environmental Agency. This includes periodic sampling and analysis of wastewater. Good wastewater management is essential for maintaining environmental quality and public health, by complying with applicable regulations, hotels can ensure that their operations do not negatively impact the surrounding environment.

## CONCLUSIONS

From this study, we can conclude that the level of compliance of the four hotel industries in Cirebon City related to wastewater management shows varying results. Hotel S complies with the compliance criteria, and Hotel B and L almost comply with the compliance criteria but are still at risk of environmental water pollution. Hotel O and Hotel D still do not meet the compliance criteria due to unsupervised IPAL and lack of monitoring of wastewater. Hotel R does not even have an IPAL and directly discharges waste into urban irrigation channels which can increase the risk of environmental pollution.

For hotels that are included in the Almost Meets and Does Not Meet the requirements, it is recommended that they always consult with experts or competent institutions in wastewater analysis to ensure that the fulfillment of wastewater quality standards is in accordance with applicable regulations, and more active supervision and guidance is needed from the Environmental Service and community involvement in supporting environmental management efforts. Handling of wastewater management that violates quality standards can be done through law enforcement, and guidance from various techniques and principles of water pollution control.

This research recommends that every industry in Cirebon City begin to learn to reuse the wastewater produced and this research provides little information related to wastewater management with Physical, Chemical, Biological, and Desinfication Techniques. The information in this study hopes to be useful for the Hospitality Industry in Cirebon City.

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