



# Evaluation of Prevention of Water Environment Pollution in Ports and Motor Ships in Tanjung Emas, Central Java Province

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**Abstract.** Tanjung Emas Semarang Harbor is a coastal area in the city of Semarang which is a productive area and has potential resources for the country's development in the economic sector. High activity in Tanjung Emas waters can reduce sea water quality. Activities that can pollute Tanjung Emas waters come from activities at the port (ship ballast water), fishing boats, industrial waste and domestic waste. The research will be carried out using qualitative methods. The data collection method used is analyzing, describing and summarizing various conditions, situations from various data in the form of interviews or observations regarding problems studied in the field.

Based on the results of data analysis and discussion of problems, conclusions are drawn regarding pollution prevention at Tanjung Emas Port, Semarang. The availability of pollution prevention tools and materials is not yet in accordance with PM 58 of 2013. The level of competency of Port personnel in Tanjung Emas Semarang is not yet in accordance with applicable regulations, so there is a need for pollution prevention competency training. SOPEP (Shipboard Oil Pollution Emergency Plan) on board the KM Dharma Ferry II there are piles of building materials that are no longer in use so that if a spill occurs on the ship it cannot be handled quickly. The proposal in an effort to prevent pollution in waters is to procure equipment and materials that are not yet available at the Tanjung Emas Port, Semarang. Improving Competence in Handling Pollution for Tanjung Emas Port Semarang personnel and requiring a review of the feasibility of SOPEP ( Shipboard Oil Pollution Emergency Plan)above KM. Dharma Ferry II.

**Keywords:** Port, Pollution, Ships, Countermeasures, Personnel

## 1 Introduction

Tanjung Emas waters are a coastal area in the city of Semarang is a productive area and has potential resources for the country's economic development. High activity in Tanjung Emas waters can reduce sea water quality. Activities that can pollute Tanjung Emas waters come from activities at the port (ship ballast water), fishing boats, industrial waste and domestic waste. Minister of Transportation Regulation Number 58 of 2013 mandates that Port Authorities, Port Management Units, Port Business

Entities and ships are required to provide waste storage facilities as well as tools for preventing and handling environmental pollution. This is something that must also be done by the Tanjung Emas Ferry Port.

It is known that the cause of sea water pollution comes from water from ship washing in the shipbuilding industry which is thrown into the sea, replating waste and from the Tambak Lorok PLTU producing hot water waste. Obstacles faced by KSOP Class 1 Tanjung Emas Semarang in dealing with environmental pollution include a lack of cooperation between KSOP Class 1 Tanjung Emas Semarang and industry in supervising production processes that have the potential to cause pollution, inadequate equipment used to reprocess production waste. in every company.

## **2 Research Methodology**

The type of research used in this research is research Qualitative. According to Bogdan and Taylor, qualitative research is research that produces descriptive data in the form of written or spoken words from people and observed behavior, in this case the port environment and ship personnel.

## **3 Results and Discussion**

Based on surveys conducted in the field, the Tanjung Emas Port, Semarang, has several tools and pollution prevention materials provided to anticipate pollution in the Tanjung Emas Port, Semarang, environment. The fulfillment of pollution control equipment and materials at the Port of Tanjung Emas, Semarang, the equipment was in poor condition, such as the Oil Boom, several parts were damaged, the pressure skimmer pump was slightly lacking, the sorbent was available when purchased but not in the storage box. found and dispersant is not available. So it is categorized as PT. Port of Indonesia (Pelindo) Tanjung Emas Branch does not comply with Minister of Transportation Regulation Number 58 of 2013. In the researcher's analysis, PT. Port of Indonesia (Persero) Tanjung Emas Branch repairs and equips equipment and anti-pollution materials that are not in good condition, bearing in mind Article 9 paragraph 1 of Regulation of the Minister of Transportation Number 58 of 2013 that ports are required to have equipment and anti-pollution materials.

Based on the results of a field survey regarding the readiness of Port Management personnel in efforts to prevent pollution of PT operational personnel. Pelabuhan Indonesia (Persero) Tanjung Emas Branch stated that the Port implementing personnel do not yet have competency certificates but have carried out level 1 and 2 training regarding pollution control at the Port and in the waters.

In the field, as well as interviews conducted with HSSE Staff at PT office. Port of Indonesia (Persero) Tanjung Emas Branch is not yet ready to comply with the applicable regulations and this can be seen from the competence of the personnel at Tanjung Emas Port, especially managers who have not undertaken level 3 training. This is of course a concern for providing education regarding efforts to prevent pollution in the aquatic environment in around the harbor to maintain the stability of living aquatic

biota. In accordance with Minister of Transportation Regulation No. 58 of 2013, personnel competency is proven by a certificate of pollution prevention skills issued by an institution and/or training body that has been approved by the director general, so it is necessary to increase personnel competency regarding pollution prevention for Tanjung Emas Port personnel so that they can meet the training standards mandated in Permenhub no. 58 of 2013.

## 4 Conclusion

At PT. Pelabuhan Indonesia (Persero) Tanjung Emas Branch had several equipment damaged, such as the Oil Boom, several parts were damaged, the pressure skimmer was slightly lacking, the sorbent was missing and the dispersant was not available so it did not comply with regulations. Level 1 and 2 training has been carried out but the training certificate is still waiting from the training implementing agency and the Manager/Administrator has not yet carried out level 3 training. So the Competency Level of Port Personnel regarding pollution control at PT. Port of Indonesia (Persero) Tanjung Emas Branch is not in accordance with the regulations. SOPEP equipment above KM. Dharma Ferry 2 is available, but access to its use is hampered by items blocking the storage area.

To procure pollution prevention tools and materials that are not yet available at Pelindo so that they are in accordance with PM 58 of 2013 regulations for compliance with pollution prevention materials, at least having pollution prevention equipment and materials consisting of at least: localization tool (oil boom) 200 m (two meters) long; 1 (one) set of skimmers with a capacity of 10 (ten) m<sup>3</sup>/hour 1 (one) temporary storage device with a capacity of 25 (twenty five) m<sup>3</sup>; 1 (one) pack of absorbent material (sorbent); And d) 100 (one hundred) liters of dispersant. In accordance with PM Transportation No. 58 of 2013. Improving the pollution prevention competency of Tanjung Emas Port Semarang personnel, especially for Managers/Administrators because they do not comply with regulations. It is necessary to conduct a review of the feasibility of SOPEP on board the ship before the ship departs from Tanjung Emas Port, Semarang, so that if oil or oil spills occur, it can be handled quickly to avoid pollution in the waters.

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