ABSTRACT

The increasing number of motorcycle workshop for fulfilling the requirement motorcycle reparation and maintenance is also followed by the increasing of hazardous waste generation from motorcycle workshop activities. Hazardous waste from motorcycle workshop are used lubricants, used batteries, used rags, etc. This study aims were to determine hazardous waste generation and to evaluate the management of hazardous waste from motorcycle workshop. In order to evaluate, the existing conditions of hazardous waste management for motorcycle workshop were compared to the regulatory review.

Data were collected through surveys and field observations on 52 motorcycle workshops in Wonokromo District, South Surabaya. To obtain hazardous waste generation, the eight days samplings were done in 14 samples workshops which determined by stratified random sampling. Surveys and field observations were also carried out in the hazardous waste generator, in this case are hazardous waste collectors and transporters in Surabaya.

The hazardous waste generations for low density, medium density, and high density customer workshops were 3.41 kg/day and 0.55 kg/motorcycle.day, 5.76 kg/day and 0.74 kg/motorcycle.day, and 6.72 kg/day and 0.57 kg/motorcycle.day,
respectively. Hazardous waste composition from motorcycle workshop consisted 61% of used lubricants, 21% of used auto parts, 9% of used lubricant bottles, 4% of used batteries, 3% of contaminated packages and 1% majun. Meanwhile, non hazardous waste garbage was 1% from all wastes. Hazardous waste management that conducted by motorcycle workshop in Wonokromo District were only packaging and temporary storage, while for collection and transport carried out by other institution. In general, hazardous waste management for motorcycle workshop in Wonokromo District had not in complied with regulations. The discrepancy were packaging which not based on characteristics of hazardous waste as well as there were no label and symbol of hazardous waste on the package. In addition, temporary storage of hazardous waste in the workshop was not available, also the record of the waste generation and manifest for hazardous waste collection and transportation were not available. Hence the improvements for hazardous waste management workshop in Wonokromo District were required. Recommendations were about packaging and temporary storage which accordance with characteristics of waste, licensing for temporary storage, the existence note of the every wastes, and the manifest which had to included on for transporting hazardous waste from motorcycle workshop.

Keywords: hazardous waste, motorcycle, South Surabaya, Wonokromo District, workshop