KAJIAN PENGELOLAAN SAMPAH MAL KOTA PEKANBARU

TUGAS AKHIR

Oleh:

MELIA ANNISA AKMAL

1610943011

Dosen Pembimbing:

YOMMI DEWILDA, MT

RIZKI AZIZ, Ph. D

JURUSAN TEKNIK LINGKUNGAN

FAKULTAS TEKNIK - UNIVERSITAS ANDALAS

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ABSTRAK

Salah satu sumber penghasil sampah di Kota Pekanbaru adalah fasilitas komersial berupa mal. Sampah yang dihasilkan oleh mal cukup beragam, namun sampah tersebut tidak dikelola dengan baik, sehingga berpotensi menyebabkan pencemaran lingkungan. Perlu adanya pengelolaan sampah yang baik sejak dari sumbernya. Penelitian ini bertujuan untuk menganalisis timbulan, komposisi, potensi daur ulang dan karakteristik sampah, menganalisis kondisi eksisting, serta menentukan alternatif sistem pengelolaan sampah mal Kota Pekanbaru. Sampling timbulan dan penentuan jumlah sampel dilakukan berdasarkan SNI 19-3964-1994 yang dilakukan selama delapan hari berturut-turut pada Mal SKA, Mal Pekanbaru dan Plaza Senapelan. Berdasarkan hasil penelitian Rata-rata total timbulan sampah mal yang dihasilkan sebesar 1.230,502 kg/hari atau 21.752,562 L/hari. Komposisi sampah mal terdiri dari 20,997% sisa makanan, 48,915% kertas, 22,689% plastik, 0,622% kain, 0,298% kaca, 0,320% kaleng dan 6,158% sampah lain-lain dengan potensi daur ulang tiap komponennya adalah 86,069% sisa makanan, 54,049% kertas, 93,330% plastik, 100% kaca dan 100% kaleng. Berat jenis sampah mal adalah 0,093 kg/L, kadar air 27,271%, kadar volatil 63,720%, kadar abu 5,847%, kadar fixed carbon 3,162%, rasio C/N 20,014 dan uji biodegradabilitas 63,755%. Berdasarkan kondisi eksisting mal telah memilah dan mengolah 65 kg/h sampah kardus dengan cara menjualnya ke pelapak, sedangkan sampah yang tidak terpilah diangkut langsung menuju ke TPA. Kegiatan pengurangan sampah dapat dilakukan dengan cara melarang penggunaan sedotan plastik dan menghimbau untuk menggunakan tumbler dan totebag. Kegiatan pewadahan dengan tiga kategori pemilahan, pengumpulan dengan sistem individual tidak langsung dengan kondisi sampah tetap terpilah sesuai kategorinya, pengolahan dengan cara mengomposkan sampah sisa makanan, serta daur ulang dengan menjual sampah yang bernilai ekonomis, pengangkutan menggunakan pola SCS, serta pemrosesan akhir menggunakan sistem sanitary landfill.

Kata Kunci: *Mal Kota Pekanbaru, Timbulan sampah, Komposisi sampah, Potensi daur ulang sampah, Karakteristik Sampah, Sistem pengelolaan sampah*

ABSTRACT

One of the sources of waste generation in Pekanbaru City is commercial facility, such as mall. The waste generated by mall is quite diversed, but the waste is not managed properly, so it can be led to environmental pollution. Therefore, it is necessary to have a better waste management from the source. This study aims to analyze the generation, composition, characteristics, and potential of waste recycling, to analyze the existing condition, and to determine the alternative waste management systems for Pekanbaru City Mall. Sampling of waste generation and determination the number of samplings were based on SNI 19-3964-1994 which was carried out for eight consecutive days at SKA Mall, Pekanbaru Mall and Senapelan Plaza. Based on research results, the average total waste generation of malls are 1,230.501 kg/day or 21,752.562 L/day. The composition of mall waste consists of 20.997% of food wastes, 48.915% of papers, 22.689% of plastics, 0.622% of clothes, 0.298% of glass, 0.320% of cans, and 6.158% of other wastes with recycling potential of each component is 86.069% food waste, 54.049% papers, 93.330% plastics, 100% glass and 100% cans. The density of mall waste is 0.093 kg/L, water content is 27.271%, volatile content is 63.720%, ash content is 5.847%, fixed carbon content is 3.162%, C/N ratio is 20.014 and the biodegradability fraction is 63.755%. Based on the existing conditions, business employees have been sorted and processed 65 kg/day of cardboard wastes by selling it to informal sector, meanwhile the unsorted waste is transported directly to the landfill. Based on P.75/MenLHK/Setjen/Kum.1/10/2019, business employees need to reduce their waste generated in the form of prohibiting the use of plastic straws and urge to use a tumbler and tote bag. Storage system is carried out with three categories of sorting, the collection system is carried out indirect individual system with condition of the waste remains sorted according to its categories, the processing system held by composting food wastes and add bioactivator to reduce the value of C/N ratio, recycling by selling waste that has economic value, the transportation system using the SCS, and final processing system using sanitary landfill system.

Keywords: *Mall in Pekanbaru City, Waste generation, Waste composition, Potential reduction, Waste characteristics, Waste management systems.*