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INDUSTRIAL SOLID WASTE MANAGEMENT IN THE GOVERNORATES OF NABLUS AND RAMALLAH & AL-BIREH, PALESTINE

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Abstract

In Palestine, environmental problems associated with industrial solid waste (ISW) have increased significantly in recent years. This paper presents survey results on current industrial solid waste management (ISWM) practices in the governorates of Nablus and Ramallah & Al-Bireh, Palestine. Solid waste generated from industries was quantified, characterized and discussed in terms of generation rate, storage, reuse/recycling, transportation, and final disposal. An attempt was made to compare ISW components among Middle East countries or cities. The quantities of ISW in an order of the largest generator are 2044.2 tonne/year by basic chemical industries, 1973.5 tonne/year by food and drink industries, and 1807.0 tonne/year by pulp and paper industries. The paper, pulp, wood, and furniture industries that comprise only 3% of the total industries produce 47.7% of total ISW. 32.4% of the industries always separate their wastes into different components. 88.4% of the industries store ISW temporarily in containers. Plastic, wood, papers, and metals are the main waste materials that are being reused and/or recycled. 25.9% of the industries use recycled material as raw materials and 25.9% sell it to other companies. 39.4% of the industries transport their waste to final disposal sites on a daily bases. 68.8% of the total ISW generated is disposed of at either dumpsites or landfills. It is recommended that the ISWM that emphasizes maximizing recycling quantity and minimizing landfilling quantity be carried out through implementation of the “cleaner production” principle introduced by the United Nations Environment Programme, in all industries in Palestine.

Key words: industrial solid waste, solid waste management, waste characterization, waste management practices

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