

SOLID WASTE MANAGEMENT FOR INDUSTRIAL ZONES

Submitted By

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Abstract

Solid Waste Management is one of most important pillars for achieving sustainability, along with wastewater and energy management. Solid waste management is a major issue not only at nation and government levels but also at any facility level. One of the important facilities to consider is the industrial zones.

As most of the industrial zones in Egypt, Quweisna industrial zone is one of the important industrial zone as it contents important industries such as, engineering, ceramic, textiles, food, chemical and pharmaceutical industries. A detailed study about Quweisna industrial zone's waste generation, composition and characteristics, existing good and bad practices was conducted. The objective of the study was to provide a baseline data related to solid waste in the zone and also to suggest 4Rs strategy (A number of waste prevention techniques: Reduction, Reuse, Recycle and Recovery, and they are commonly summarized as 4Rs) for achieving a clean and green industrial zone.

Quweisna Industrial Zone generates every year 170.446 ton, almost 138.15 ton of the total wastes that reaches the final stage of disposal, and only 32.39 ton are recovered, which mean that nearly 81% of the total waste generated in industrial zone is sent-off for disposal to local municipality.

At the end, acceptable practices of waste management have been attempted (and some still in continuation) in Quweisna Industrial Zone, however, discontinuation and lack of participation from the zone administration is in concern. The waste audit

(composition, characteristics) results show a great scope for many waste recovery and recycling opportunities in Quweisna Industrial Zone, to transform into a Green industrial zone.

Quweisna Industrial Zone has, to some extent, improved its solid waste management. With the right solid waste management and good sustainability plan action, Quweisna Industrial Zone will become a Green zone. However, there needs for planning, policies and participation from the Industrial Zone administration and the companies' owners towards attaining a sustainable solid waste management.

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List of Abbreviation

Symbol	Description
SW	Solid Waste
SWM	Solid Waste Management
SWMS	Solid Waste Management System
SSWM	Sustainable Solid Waste Management
MSW	Municipal Solid Waste
3Rs	Reuse, Reduce and Recycle
4Rs	Reuse, Reduce, Recycle and Recovery
MRFs	Material Recovery Facilities
EEAA	Egyptian Environmental Affairs Agency
GDP	Gross Domestic Product
MSEA	Ministry of State for Environmental Affairs
RBO's	Regional Branch Office's
EIA	Environmental Impact Assessment
EPAP	Egyptian Pollution Abatement Project
GIS	Geographic Information System
GHG	Green House Gases

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