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IDENTIFICATION AND CLASSIFICATION OF INDUSTRIAL SOLID WASTES IN AMMONIA UNIT OF RAZI PETROCHEMICAL COMPLEX AND FEASIBILITY OF WASTE MINIMIZATION

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Abstract:

Petrochemical industries are considered as strategic and important sectors in economic development of Iran. Razi petrochemical factory is one of complex in Iran, established in 1970 with 100 hectare. In this research, the possibility of waste minimization in the ammonia unit of Razi petrochemical complex with about 1000 tons per year was studied for a period of 18 months from September 2003 to April 2005. More than 20 site visits were conducted and the required information was collected. Factors such as industrial solid wastes quality and quantity, sources of generation, production period and the present management practice, were studied. Petrochemical solid wastes were classified based on the recommended method of the United Nations and appropriate policies were suggested for waste minimization. The collected results of this study show production of 185 tons of industrial solid wastes from 45 sources which contained 68.5% catalysts, 10.25% metal barrels, 18.61% aluminum ball, 2.62% plastic barrels and 0.02% paper. 93.3% of these wastes were generated as the result of catalysts change, 3.3% as the result of using chemicals and oils, 1.7% as the result of methanol solution amid application, and 1.1% because of aluminum ball changes. Based on the UNEP methods, the ammonia unit wastes classified as 19/7% hazardous and 87,12% non hazardous. At present 87.12% of these wastes are being dumped in the area and 12.88% are sold. Proposed procedures for waste minimization contain 68.5% reuse and recycling and 31.5% recycling.

Keywords:

[minimization](#) . [petrochemical waste](#)

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