

Waste management onboard the offshore drilling rigs

Marian CIRNAT^a and Elisabeta CHIRILA^{b*}

^a*Oil Services Goup, Constanta Harbour, Berth 34, 900900 Constanta, Romania*

^b*Department of Chemistry, Ovidius University of Constanta, 124 Mamaia Blvd, 900527 Constanta, Romania*

Abstract The petroleum industry poses high risks to the environment. Oil well drilling activities produce a variety of solid and liquid wastes. Some of these wastes are attributable to exploration and production (E&P) activities (drilling wastes, produced water, treatment and work over fluids), while others are due to either human presence (sanitary wastes, food wastes) or generic industrial operations (wastepaper, scrap metal, used paints and solvents). There is increasing international concern that wastes be properly managed in order to minimize their potential to cause harm to health or the environment. The paper discusses the waste management system onboard the offshore drilling rigs operating on the Black Sea continental platform. Starting from 2005, responsible waste management was accomplished through hierarchical application of the practices of source reduction, reuse, recycling recovery, treatment and disposal. In the studied period (2005-2007) a maximization of reused and recycled waste volumes and an important minimization of the generated and eliminated wastes have been observed; the generated wastewater volume decreased by 28%, plastics wastes by 83%, while the amount of recycled waste increased significantly. An explanation of the waste management system's improvement can be the continuous training and education of the operators concerning the waste management options available for wastes generated by their activities.

Keywords: offshore drilling rigs, drilling fluids, primary wastes, waste minimization
