

PECB

When Recognition Matters



WASTE MANAGEMENT IN OIL AND GAS INDUSTRIES



Every industry during the manufacturing of products or provision of services accumulates a specific amount of waste, which in the majority of cases is of adverse consequences. All profit maximizing organizations in these industries are nowadays more focused towards the minimization of wastes in their production processes. Not to leave any ambiguity with respect to the meaning of “waste”, it can be defined as either unwanted material left over from a production process or output derived from activities that consume resources but add no value.

Reducing waste enables organizations to cut costs, to produce more output with the same amount of resources or same output with fewer resources, to reduce environmental impacts from the organization’s activities, thus contributing to higher profits, to improve the company image and to increase competitive advantage.

This article handles the management of waste from oil and other petroleum productions, which is generated during exploration and production activities.

An oil and gas industry could highly benefit from these features, especially nowadays with oil markets hitting six year lows, with 42\$ a barrel, and the concerns that the glut of oil is set to grow according to Wall Street Journal . With every oil producer facing lower returns because of this price drop and oil supply glut, it is of great interest to invest in a management system which ensures waste reduction and many other benefits for the oil and gas industry.

Oil and gas production activities can generate waste emissions in the form of unwanted material such as: operational wastes that are discharged to sea under permit, and unwanted materials (general waste, paper, glass, empty metal and plastic drums, oils, sludge and chemicals, etc.). The volume of waste depends on the level of production activities, drilling activities, and managing of processes within the organization. Some of these materials are inherently hazardous, however if managed properly an environmental impact can be mitigated. According to the American Petroleum Institute, approximately 1.21 barrels of total drilling waste are generated for every foot drilled in the United States; the amount of accumulated drilling waste is approximately 139,961,305 barrels equivalent to almost 9000 Olympic swimming pools² .

¹Friedman, Nicole, U.S. Oil Price Hits New Six-Year Low, 17 August 2015. *The Wall Street Journal*, New York

²Solid waste management, Intermountain Oil and Gas BMP Project, Getches-Wilkinson Center for Natural Resources, Energy, and the Environment, Colorado

The second aspect of waste in production is the management of activities in such a manner that each of the activities has its purpose and contributes to the final output by adding value. Both, this type of waste and the former type can be reduced by an effective and efficient management system. A quality management system standard for oil and gas production in an organizations is provided by the International Organization for Standardization ISO 29001:2010, Petroleum, petrochemical and natural gas industries -- Sector-specific quality management systems -- Requirements for product and service supply organizations.

With regards to waste management, this standard enables organizations to maintain knowledge of laws and regulations, maintain a system for pollution/waste minimization, an incident preparedness program, adequate training programs, transportation program and other necessary procedures and processes.

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