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Design, Supply, Install and Commission Project to Convert Existing Odor Control Unit (OCU) to Bio-Trickling Filter in MPS-3 A'Seeb Area

SCOPE SYNOPSIS

- Odour Control Unit, OCU, is continuously extracting Odorous air from MPS#3 to eliminate emissions of H2S and other odour causing gases to the atmosphere and to ensure safe working conditions at the site.
- The Cleaning process of the existing odour control facility is based on a wet scrubber absorption system with a counter current flow pattern. Odorous air is brought in contact with a liquid scrubbing chemical which will absorb the different odorous compounds in the extracted air (i.e. H2S) and are thereby removed from the air. To increase the efficiency of the system as well as to reduce the operation cost of the system, chemical Scrubbers could be converted to a Bio Trickling System.
- In the biological air treatment, odorous air is brought in contact with a media (also called the carrier) used to provide an optimal site for microbiological activity. The microorganisms (also called biomass) can remove H2S.
- The components to be removed are typically introduced to the media at the bottom of the packing and are transferred from the gas phase to the liquid (water) phase on the media surface. Once in the liquid phase, the specific microorganisms that are attached to the packing degrade the compounds.
- In MPS-3, for polishing stage, the cleaning process is based on an activate carbon adsorption system with a vertical flow pattern. Odorous air is brought in contact with a carbon bed which will adsorb the different odour compounds in the extracted air which will be mainly H2S and are thereby removed from the air.
- The upgraded odour control system shall reduce the load of H2S discharged to the atmosphere by more than 99.95%.