Planning for Water Reclamation

in a Semiconductor Fabrication Facility

By

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Abstract

Water reclamation is a viable means of providing for the future water needs of the microelectronics industry while reducing demands on the public water system. Escalating factory costs, increased burdens on municipal infrastructure, governmental compliance, limited resource availability to sustain a young, fast changing industry, and the need to deliver new, expanded, and re-equipped semiconductor factories faster underscore the importance of developing a greater understanding and more widespread implementation of process wastewater reclaim in the semiconductor industry.

Water reclamation is possible and has great potential for implementation in new and existing factory design. It can also be accomplished using available technologies and can be cost effective when considering operational savings inherent in consumption, discharge reduction, and discharge quality requirements. In this paper, a water reclamation plan is developed with system descriptions,

diagrams, and flow analysis for a large-scale production fab. The plan is identified early in the life-cycle of a new facility.