

STEP 2 CASE STUDY

Overcoming barriers during the implementation of a TEST action plan

At the start of the project, a beverage company in Tunisia was planning to build a wastewater treatment plant (WWTP). The company's main motivation to implement this action was a requirement of its major client, which had stated that it might consider voiding the supply contract if this request was not met.

The TEST Team had to seek management support and work on improving internal communication in order to ensure that everyone received the right message about TEST as a win-win strategy and that implementation of the action plan would lead to improvements in the production process and contribute to increasing the efficiency of the WWTP under construction.

The TEST team integrated the TEST action plan into the company's ISO 14001 Environmental Management System, which was in the preparation stages. The result was a strengthened EMS program with a strong focus on resource efficient and cleaner production. Other procedures were also developed to support good housekeeping and process optimization measures.

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The approved TEST action plan included a number of good housekeeping measures designed to reduce by one third the organic pollution and the volumetric load going to the drain and on to the WWTP. For instance, the implementation of a management system for on-time sorting of returned goods (soft drink bottles) from clients would contribute to product recovery of 0.4% and reduce the volume of non-conforming products sent to drain by 95%. A procedure for on-site segregation and a storage system were also

included in the EMS to valorise expired/damaged products as animal feed. As a result, COD and BOD₅ loads to the WWTP were reduced by 27 t/y and 21 t/y respectively.

When the TEST team started its work on implementation of the action plan, it highly recommended that these good housekeeping and low cost measures be implemented before designing the WWTP as it would reduce size of the WWTP and therefore the needed investment and operational costs. However, the Team did not receive enough support from the production manager, who was reluctant to change routine procedures as the company was certified for quality and food security (ISO 9001 and ISO 22000). The mind-set of the production manager clearly highlighted a typical barrier: the tendency to view good housekeeping as 'soft' measures rather than 'real' measures to be prioritized.

Although the WWTP was finally commissioned without taking into account the expected load reduction derived from the implemented measures, it was verified that once installed the WWTP could operate with one-third less electricity for the aeration system compared to the design parameters. This drop was due to organic load reduction of the RECP measures. Initial financial and environmental benefits were achieved, creating confidence and motivation among the rest of the staff. This paved the way for the generation of new options and the subsequent implementation of the more costly measures in the action plan. The company also received ISO 14001 certification in 2012.

Top management appreciated and supported the TEST team, which was also manifested in rewards. The internal TEST team received a promotion, and were allowed to participate in other training seminars, and given responsibility for sharing the results with other production sites in the group, with the objective of replicating the experience. The company now enjoys the best resource consumption rates in the group and the project team provides regular technical assistance to increase resource productivity to all other production sites of the group.