



VPA and Environmental Management

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In the current economic situation, companies must set themselves apart from the competition by consistently delivering top quality products and services at the best price. Managers, therefore, look to continually improve their company's performance. An operational analysis, using the "value added production analysis" (VPA) technique, makes it possible to identify good performance elements, pinpoint areas where the activities carried out add no value for the company and optimize gains from value added activities.

Of the elements taken into account during a VPA, waste management is unfortunately often neglected, and this despite the fact that the associated costs and problems can have a major impact on overall process performance.

Let us analyze an activity that does not add value: glue, received in barrels, is poured into plastic containers for distribution to workstations. Once empty, these containers are refilled. The analysis shows that purchasing the glue in plastic containers would eliminate the handling and pouring operations and free up manpower. Unfortunately, the analysis did not consider the management of empty containers and their return to the supplier. Ultimately, the large increase in waste volume and the latter's disposal costs cancelled all the anticipated gains from eliminating an activity without added value.

Conversely, a sizing powder paint system, although initially more expensive, is more profitable than using liquid paint, since it allows for better recuperation of raw materials, requires fewer air filters and eliminates the use of dangerous organic solvents. Add to this a considerable decrease in the risk of environmental incidents (solvent spills into the sewer system) and the risk to workers (no longer exposed to carcinogenic solvent vapours).

These two examples show the inseparable link between the analysis of a process to increase its efficiency and the application of good environmental management practices.

Waste management must also be re-evaluated on the basis of intrinsic added value. It is important to remember that the objective of this VPA analysis is to increase both the value of the product or service and customer satisfaction.

Basically, customers are looking for the best quality/price ratio. Other elements, such as the availability of the product at the right time, and the quality of after sales service, are also very important. Of late, another element is taking on a greater significance: the impact on their corporate image. Over the past few years, managers are questioning the impact of supplier selection on the image projected by their company. The implementation of the ISO 14001 environmental management international standard, and the existence of the *Dow Jones Global Sustainability* index, which includes international corporations with the best environmental management practices, are good illustrations of this new philosophy. But don't be deluded: these managers have incorporated environmental aspects into their operating methods because

consumers and as a result, shareholders, have become much more aware of environmental realities.

More than ever before, enterprises will favour establishing a relationship with suppliers that have a good corporate environmental image. In some cases, they will even accept higher prices in return for a reduction of the risks to their image.

In this type of situation, waste management becomes a value-added activity. The very definition of waste is thus expanded from the notion of waste generated by the production process to now include:

- Unused or nonconforming raw materials,
- Packaging materials, and
- Nonconforming products.

It is therefore important to review manufacturing processes from a new standpoint, incorporating the concepts of good waste management. The application of the 4Rs principle (**R**educing, **R**eusing, **R**ecycling and **R**ecovering) provides a very interesting basis for analysis in this regard.

Unfortunately, gathering all the information necessary to a relevant analysis of the impact of waste is not always easy. Assistance can be obtained from various government organizations and environmental departments, specialized recycling companies that will willingly provide information about their services, a company's suppliers, most of which will be very interested in participating in their customers' efforts and lastly, private consulting companies.

Apart from the difficulties in recognizing good opportunities, the success of any waste management process requires changing work habits and employee attitudes. Therefore, it is important to encourage employees to participate in the evaluation and implementation process, make them aware of the issues and keep them informed about the implementation of the elements selected, as well as the results obtained. Many solutions to problems that appeared complex at the outset have emerged during conversations with employees or as a result of following their suggestions. And if, in addition to the environmental aspects, the analysis also helps solve problems related to the well being of employees, the success will be that much greater.

Including waste management as a core issue in value added analysis will help a company be more successful in any industry. It could improve profitability and enhance the company's image with customers, government organizations, employees and business partners.