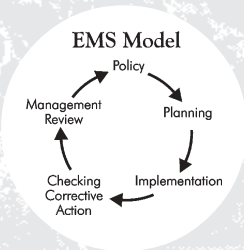


## EMS CASE STUDY:



# EATON CORPORATION - AUTOMOTIVE DIVISION

Location:	Roxboro, N.C. (Person County)
Industry:	Motor Vehicle Parts and Accessories (SIC Code 3714)
Pollution Prevention Application:	EMS and ISO 14001
Water Reduction:	Not Calculated
Annual Savings:	\$400,000
Contact:	Brian Phillips, manager of safety and environmental operations in Roxboro, (336) 503-6538

## BACKGROUND

The Eaton Corporation plant located in Roxboro, N.C., is one member of the Eaton family of businesses. The Roxboro plant contains business units for air control and lash adjuster divisions and is responsible for manufacturing automotive components such as tire valves and engine components. The Eaton Roxboro plant holds two National Pollutant Discharge Elimination System (NPDES) permits to discharge into North Carolina waters, as well as a pretreatment permit for heavy metals, oils and grease for discharge to the Roxboro Publicly Owned Treatment Works (POTW). The Eaton Roxboro plant is also a large quantity generator of hazardous waste.

The Eaton Roxboro plant has a quality management system in place since 1996. Driven by a desire to become more competitive and comply with industry trends, Eaton became third party-certified to ISO 14001 in June 2000.

## PLANNING AND IMPLEMENTATION

Upper management at the facility is involved in the environmental management system (EMS) and emphasizes its value not only for improved compliance, but also for the potential to identify and minimize costly waste. Environmental issues are given the same priority and level of attention that other plant issues such as quality concerns or production interruptions.

When determining the facility's aspects and impacts, local environmental conditions such as permitted and potential

discharges to the surrounding environment were considered. In setting objectives and targets, Eaton considered items such as permit limitations, catastrophic releases, source reduction, energy consumption and the pollution prevention hierarchy. In developing its EMS, Eaton kept interested parties (customers, employees and neighbors) updated with news of the environmental policy through public releases to local planning committees and the media. Developments in the EMS are also communicated to the employees during monthly staff meetings.

Eaton has also designated an EMS committee comprised of representatives from key functions in each of the two business units located at the Roxboro site, as well as an internal auditing team comprised of qualified engineers. An EMS steering committee makes environmental management decisions concerning the identification and implementation of environmental concerns and establishment of environmental priorities. The steering committee is involved in the development of annual plant goals through providing plans and recommendations as well as identifying goals and targets for the upcoming year. The committee also produces a quarterly findings report for the overall management team. The chain of command for the EMS begins with the environment, health and safety (EHS) manager--a staff level position--reporting to the human resources (HR) manager. The site HR manager has the responsibility of reporting to both of the business unit managers and also to a divisional HR manager.

Employees are made aware of the potential effects their job duties may have on the environment through EMS training in Eaton's environmental work instructions. All employees,



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including part-time employees, receive some level of training on environmental work responsibilities and instructions. Other parties that play an important role in Eaton's operations include vendors, sales people and contractors. These parties receive training on EHS operations prior to coming on-site. The guard verifies training prior to issuing an admission badge. Environmental training for employees and other concerned parties is refreshed on a quarterly basis.

Many EMS factors are integrated with the existing Quality Management System (QMS) including training, document control, and tracking of non-conformance item findings. Materials information relating to environmental issues is tracked through invoices, purchase orders, manifests and internal tracking sheets. Legal requirements are tracked and kept updated through reviewing permit requirements, referencing legal agency Web sites, and through an environmental compliance newsletter.

## CONTINUAL IMPROVEMENT

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Eaton has ensured continual improvement through quarterly management review meetings that track progress on environmental projects and programs. Periodic reviews of corrective and preventive actions and new processes and services ensure environmental aspects are considered and addressed, and play an important role in the continued improvement of the EMS.

The environmental management department is evaluated through internal assessments conducted biennially by staff members from outside of the Automotive Division. An internal multimember team also audits the environmental management department every three years for environmental compliance.

Members of the environmental management department undergo an annual performance review conducted by the environmental steering committee. Other employees also undergo an annual performance review in which they are evaluated for their efforts toward housekeeping and safety. Their environmental responsibilities are covered at that point.

These efforts at continual improvement have paid off in facility compliance and substantial waste disposal costs. Development of EMPs (environmental management plans) have enabled tracking of aspects of the plant operations either not previously tracked or overlooked. As a result, overall plant compliance has greatly improved.

## LESSONS LEARNED

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Its EMS has brought several advantages to Eaton. These include having a systematic approach to handling environmental issues in place and the overall plant cost savings coming from tracking resources and accounting for them. The EMS also provides the more intangible benefit of employee/community pride coming from having the plant be a good environmental neighbor. Part of being a "good environmental neighbor" means including concerned parties in communication efforts to enable awareness of environmental efforts through involvement in local planning committees. The largest benefit gained by Eaton is the systematic approach to managing environmental resources, thereby giving the system the potential to conserve, rather than drain, resources.

Some difficulties experienced during EMS implementation included gaining support to initiate the project. Many originally thought the project was just another program resulting from a corporate trend that would offer only marginal value. Financial costs of the EMS were fairly substantial and primarily involve providing several hours of training annually to more than 500 employees, as well as the creation of a new staff position and the costs of certification. Following EMS implementation, weekly staff time devoted to system maintenance is about 25 hours each week. Despite these costs, the plant has seen in excess of a \$400,000 savings in 2001 as a result of changes brought about by the EMS.

Eaton is also undergoing an effort to broaden the influence of the EMS. The company is instituting programs establishing environmental expectations with key suppliers.