



# Federal Foam Technologies, Inc.

Planning/Environmental Management Systems #3.51 August 2001

**Location:** New Richmond, Wisconsin.

**Details:** 115 employees; privately owned; with annual sales of less than \$25 million.

**Facility:** about 100,000 sq. ft.; built 1995.

**Product description:** Fabrication of custom designed foam products for a variety of national and international markets. Typical applications:

- cushioning, comfort or therapeutic;
- noise and vibration control;
- protective packaging;
- shock absorption, gasketing or filtration; and
- thermal insulation.

**Manufacturing process:** Various types of foam and foam composites are purchased from suppliers and then modified to meet customer needs. Processes on site include splitting, laminating, die cutting, sealing, routing and thermoforming.

**Waste generated:** Most of the waste generated consists of foam with specialized coatings (about 600 tons annually), which cannot go through a foam recycler at this time. Other impacts include emissions and hazardous wastes from using adhesives and solvents.

## EMS beginnings at Federal Foam

Federal Foam's beginnings with environmental management systems (EMSs) were largely environmentally driven. Community relations (quality of life in a rural area) and demonstrating environmental responsibility were important factors. To remain competitive in their industry, reductions in cost and product price were necessary.

Federal Foam also saw the marketing potential inherent in the adoption of an

EMS. European and U.S. markets are starting to require conformance with an EMS through various standards, including ISO 14001.

In 1999, Federal Foam became ISO 9001 certified to remain competitive in light of the growing demand for a worldwide quality management system standard. Soon, the focus shifted to ISO 14001, which dealt with implementing EMS standards in industry. Despite its clean record, Federal Foam decided to become certified, and in July 2000 began the journey into ISO14001. It wasn't long before the company realized it had much more to gain from EMS implementation than it had expected.

## Excellent return on investment

"What most people don't realize," says Jill Davis, Federal Foam's Environmental Health and Safety Director, "is that with ISO 14001, the payback is immediate." When Federal Foam became ISO 9001 certified, it was nearly a year before the company began to see any return on its investment. But with ISO 14001, results could be seen as soon as the process began.

For example, one of the areas they began to analyze was the amount of waste they were sending to landfill; essentially foam bought and processed but not sold. The numbers showed them that if Federal Foam could reduce its landfill costs by 40 percent, it could save \$15,000 annually. To see a similar effect on the balance sheet from sales alone, Federal Foam would have to have an additional \$60,000 in sales. Suddenly, reducing waste became one of the company's best options for cutting costs.

## Federal Foam's EMS methodology

When Federal Foam began the ISO 14001 registration process, it found it already had



most of the operational controls in place: a hazardous waste program, a system and schedule of measurements and calibration, and other typical business elements — everything from purchasing records to management reviews. It was just a matter of organizing and actually analyzing the elements and how they fit into the big picture.

To do this, they developed the *Cost of Environment*, a monthly internal report that looked at environmental costs under four categories:

1. prevention costs (e.g., training, environmental review, safety incentives);
2. appraisal costs (e.g., equipment, calibration, ISO and third-party audits);
3. internal failures (e.g., worker's compensation, landfill/recycling, corrective action); and
4. external failures (e.g., penalties, legal liabilities, incident cleanup).

The costs for each category are expressed as a percentage of sales — an approach Federal Foam felt best expressed its environmental costs to management. This method allowed the company to focus on increasing prevention costs and reducing internal and external failures.

Also included in the *Cost of Environment* report are the company's water, electricity and natural gas consumption; the amount of foam landfilled; the amount of paper, foam and laminated products recycled; and monthly worker's compensation claims. Each month, Federal Foam's cross-functional environment steering committee addresses the top areas of concern and forms task groups to bring about cost reductions in these areas.

### Challenges in EMS development

The most difficult part of implementing the EMS came at the start of the process, with the dreaded question, "Where do we begin?" With few examples to guide them, Federal Foam had to learn the answer to that question the hard way. Looking back, Davis advises, "Before anything else, a company must first identify the aspects and impacts" [under ISO 14001, all the possible ways in which its materials and processes can impact the environment]. Not realizing the benefit of what seemed an overwhelming task, Federal Foam skipped over the aspects and impacts and found its team having to backtrack, losing three months of valuable time and energy. When their list was eventually created, the aspects and impacts were prioritized and the company began looking for solutions to the biggest problems.

Federal Foam was also working on its legal and regulatory requirements at this time, identifying and noting all legal and regulatory rules and responsibilities that apply to the company and its processes. Mac McLeod, a key player in the EMS adoption at Federal Foam, notes, "It's really only a matter of doing what we really should have done in the first place, before someone comes knocking at our door. One of the challenges we encountered was finding out that our local government [City of New Richmond] had rules of their own along with the rules we must follow being in the New Richmond Industrial Park."

### Current and future EMS development efforts

Federal Foam is preparing for the Stage 1 Audit (the first in a series of audits leading to initial ISO 14001 registration) scheduled for September 2001. Much of their attention at this time is focused on the training and preparation necessary for a successful Stage 1 audit.

Federal Foam plans to continue its data collection until the beginning of 2002, when it will begin to establish goals and objectives based on its *Cost of Environment*. Beyond that, the company will continue collecting and analyzing data, conducting internal audits and undergoing third-party audits both for ISO and customer purposes. The company expects to see a reduction in environmental costs to the business and continued improvements for its EMS.

*"Federal Foam Technologies has always been very conscious of environmental issues. It became clear that we could achieve greater results in this area with a more formalized and structured way of managing these issues. That's when we began to develop our EMS. During the course of becoming ISO 9001 certified we became aware of ISO 14001. Our ISO 9001 quality management system had most of the things in place to incorporate our EMS so we chose to follow the ISO 14001 guidelines. An EMS provides us real cost savings, has marketing value and ensures that we operate our business in an environmentally responsible way." -- Wyman D. Smith, president*

### For more information

To learn more about the advantages of EMS adoption in Minnesota companies, contact Al Innes of the Minnesota Pollution Control Agency at (651) 296-7330. Or you may contact Jill Davis; Safety and Health Director, at (715) 243-3619 or Mac McLeod; Quality Assurance Manager, at (715) 243-3628 for help or more information.