CASE SUMMARY

9 Mahle-Parr

MAHLE-PARR FILTER SYSTEMS, INC.

Des Moines, Iowa (Polk County)

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MAJOR: Civil Engineering
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The Company

MAHLE-Parr Filter Systems, Inc. is a division of MAHLE, Gmbh. in Stuttgart, Germany, that specializes in pistons and engine components, valve train systems, and filter systems. The Des Moines facility primarily manufactures fuel system components.

Project Background

MAHLE-Parr had completed an environmental audit and wanted an intern to review and prioritize the recommendations from the report. Once this had been completed, the intern was to begin implementation of some of the recommendations.

Incentives to Change

A brief listing of recommendations:

♦ Identify and categorize all facility wastes as hazardous, non-hazardous, used oil/filters, universal waste, or wastewater.

♦ Accurately inventory facility petroleum product storage practices. If individual petroleum product storage capacity exceeds 660 gallons, prepare a Spill Prevention, Control and Countermeasures (SPCC) Plan. If storage capacity exceeds 1320 gallons, implement a SPCC Plan. If neither limit is exceeded, maintain the inventory to document that a plan is not necessary.

♦ Reduce/eliminate wastewater contaminants (and resulting compliance liability and expenses) through modification of existing parts washer operations and/or installation of pretreatment/evaporation technology. Further justify the cost/benefit of pretreatment/evaporation technology implementation by evaluating the feasibility of incorporating other facility wastewater into the "treatment" process rather than relying on off-site commercial disposal.

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Results

Six different pollution prevention and waste reduction options were explored. These options included tracking waste streams, conducting an inventory of laboratory chemicals, looking for alternative ways to dispose of baffle cover scrap material and copper brazing paste buckets, determining the need for and developing an SPCC plan, and implementing a plastic sprue recycling program for waste from the injection molding machine.

Tracking of waste streams served as a way to determine exactly what was coming into the facility and what was passing out of each process in terms of products and waste material. This project was undertaken to gain an understanding of what processes take place in the Des Moines facility. Information was documented on an Autodesk© AutoCAD® file of the floor layout of the facility. A description of product streams and waste streams was traced out in the drawing file. This project was submitted for use in starting an ISO (International Organization of Standardization) 14001 certification project.

An inventory of laboratory chemicals also served as preliminary groundwork for ISO 14001. It was also used to determine storage procedures and the amount of chemicals the facility has on hand in the laboratory.

The waste reduction project focused on the covers used on the sound abatement baffle material from the 700,000 baffles produced annually. The covers are made of a polyester fabric material. In cooperation with the Iowa Waste Exchange, a vendor was conducting a trial using the material as packing filler. This has the potential to divert 7,000 pounds annually from the landfill.

A bucket exchange program, enhanced employee training, and interaction with the supplier were actions taken on the copper brazing paste issue.

The final project evaluated the grinding of plastic sprues used in the injection molding machine and reusing them in a mixture of virgin material and reground material. This project not only reduces waste material, it also represents a significant cost savings. Implementation of this proposal would eliminate over 4,000 lbs. of waste from the landfill and save over $20,000 in virgin materials. This proposal, with a six-month payback period, was submitted to management and is currently under review.