Alcoa Inc.

CASE SUMMARY 2

ALCOA INC.

Riverdale, Iowa
Scott County

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Major: Environmental Management
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The Company

Alcoa Inc. is the leading producer of primary aluminum, fabricated aluminum and alumina. Alcoa Inc. is located in more than 40 countries and produces aluminum products used worldwide in a wide variety of industrial and consumer applications. Alcoa Davenport Works is within Alcoa Mill Products' business unit, which produces intermediate aluminum products including aerospace components, along with aluminum sheet and plate.

Project Background

Alcoa Davenport Works has recently become ISO 14001 certified and has a pollution prevention program in place. A landfill reduction goal of 30 percent is to be achieved by the year 2005.

Incentives to Change

Alcoa Davenport Works plans to reduce the volume of material landfilled to achieve landfill reductions goals. Alcoa Davenport Works also desires to re-establish a waste minimization steering committee to take on a broader focus of minimization opportunities around the facility.

Results

Opportunities for potential annual landfill reduction and cost savings include:

1. Enhanced Segregation Effort - $5,010 or 202 tons per year. Tubs designated for recyclable materials were made more recognizable and convenient. Training was also completed to gain awareness and cooperation for the effort. This attempt could increase the recycling effort by 20 percent. (Implemented)

2. Use of Recyclable Oil Absorbents - $6,917 or 18 tons per year. Oil absorbent recycling includes the cleaning and reuse of the absorbent materials plant-wide. Although the waste stream is not a large contributor to the landfill, it still provides some potential in terms of cost savings. (Recommended)

3. Recycling of Oily Sediment - 1,288 tons per year. The possibility of sending the oily sludge to a biofuels company that will turn the material into a gaseous form for energy use was explored. If this material was diverted from the landfill, a 21 percent landfill reduction could occur. (Further study needed)

4. Recycling of Refractory Material - 555 tons per year. Refractory material from the demolition and maintenance of furnaces in the ingot area may be crushed and sent to cement manufacturing facilities to be used as an additive in cement. Samples were taken from a furnace demolition and analyzed to consider the alternative for future demolitions. (Further study needed)

5. Cleaning and Reuse of Filter Paper - 12 tons per year. The filter paper is used to filter recycled coolant in the hotline rolling areas. This filter paper could be cleaned by an outside vendor and then reused again in the hotline. The estimated annual cost savings if the product is cleaned is $10,500 per year, although this estimate does not include the cost of re-rolling the cleaned material. (Further study needed)

6. Re-establishment of a Waste Minimization Committee - The Joint Waste Minimization Steering Committee was re-established in an attempt to take on a broader focus of minimization opportunities than the previous pollution prevention committee. The Joint Waste Minimization Steering Committee will determine and provide resources for the implementation of necessary actions for waste minimization opportunities around the facility. (Implemented)

Six Pollution Prevention recommendations were made to Alcoa Davenport Works, which together amounted to a potential savings of 4,126,000 pounds or 2,063 tons of material diverted from the landfill.