

SUSTAINABILITY, RECYCLING, AND WASTE TREATMENT IN THE ALUMINUM INDUSTRY

Ray Peterson¹

Abstract

Recycling has long been practiced in the aluminum industry due to the inherently high value of the metal. Both manufacturing scraps and post-consumer scraps find their way back into the metal stream for reuse. As an industry we also try to minimize our by-product materials requiring waste treatment. The aluminum industry can be broken down into four major divisions: • Bauxite to Alumina; • Alumina to Aluminum Metal; • Aluminum Metal to Useful Product; • End-of-Life Product to Aluminum Metal. Each of the four major sub-areas will be examined for sustainability, recycling, and waste minimization. Significant progress has been made in reducing the larger by-product streams, but further effort is still needed in several areas. In addition to new technologies, both economics and local laws will dictate the degree of progress made on eliminating many waste streams. A short discussion of aluminum's sustainability will also be made.

¹ *Aleris International Inc.*