

A Curtain of Air Assists with Cerro Grande Rehabilitation Project

After the Cerro Grande fire in 2000, the Department of Energy mandated that the Los Alamos National Laboratory find ways to mitigate potential property damage in the event of future catastrophic wildfires. The Facility and Waste Operations - Cerro Grande Rehabilitation Team won a Pollution Prevention award from the Lab for their project to reduce pollution from the timber thinning activities of the Cerro Grande Rehabilitation Project. The timber removed is used for several purposes instead of becoming waste. The biggest and most valuable trees are sold



to local sawmills, and firewood is donated to the public. The branches, also known as slash, are either turned into mulch or burned into ash. Burning timber in the open creates excessive air pollution, so the Lab purchased three Air Curtain Destructor (ACD) units to significantly reduce air emissions.

Forested areas are being thinned throughout Lab property, especially around buildings, to prevent wildfires from reaching buildings. The Cerro Grande Rehabilitation Project will ultimately thin approximately 10,000 acres of forest on Lab property and remove about 250,000 tons of material. Many of these forested areas previously had a timber density in excess of 1000 trees per acre, but a healthy forest density for northern New Mexico is determined to be between 50 and 150 trees per acre. The thinning project should be completed by summer of 2003. By the end of 2002, approximately 370,000 board feet of timber had been sold to small Northern New Mexico sawmills and about 3000 cords of wood had been released to the public. Over 60,000 cubic yards of slash had been burned in the ACD units.

The slash burns at up to 2500 °F in a walled pit with the ACD positioned along the top of one edge. The smoke, particulates, and pollutant gases are contained within the pit by a curtain of air produced by the ACD. The air curtain moves in a slightly downward angle at a speed of about 100 miles per hour to trap airborne emissions by forming an air cover over the pit. The particulates eventually settle, and any hydrocarbon emissions are completely combusted into carbon dioxide. The ACD emits about 95% less sulfur dioxide than open burning, and overall air emissions are reduced by approximately 75%. The residual ash is only about 2% of the original volume of slash. The emissions control program has been so successful that the New Mexico Environment Department allows the ACD to operate around the clock instead of just a few hours a day as they originally mandated.

For more information about the Cerro Grande Rehabilitation Project, please contact Stephen Mee, Program Manager. He can be reached by phone at 665-8024.

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