ROCKFALL MITIGATION
Product: 2000 & 3000 kJ Standard (CTR) and Hybrid Barriers

Problem
According to the U.S. Department of the Interior Geological Survey Open-File Report 2010-1131, smelting in Palmerton, PA resulted in severe heavy metal pollution, including cadmium, lead, and zinc. This pollution led to significant erosion and left a large area devoid of almost all plant life. Due to the geology of the area, rockfall was always a potential problem; however, because of the lack of plant life and its ability to slow erosion, the problem was significantly increased.

Pennsylvania Route 248 runs along the most threatened area, which placed motorists, workers and trail visitors at risk of a catastrophic rockfall event.

Solution
Due to the size and extent of the project area, a large amount of rockfall mitigation was required. This included hundreds of thousands of square feet of rockfall drapery materials, as well as hundreds of feet of standard and hybrid rockfall barriers. An extensive rock scaling and bolting program was also required.

Technical Characteristics
2000 & 3000 kJ CTR Rockfall and Hybrid Barriers with Ring Net panels. Barrier heights ranged from 13 to 17 feet; lengths ranged from 109 to 327 feet. The Hybrid Barrier was selected in this specific area to reduce the cost of maintenance, due to the accessibility to remove rocks after impact.
Client
FEDERAL HIGHWAY
Main Contractor
JANOD
Designer
GOLDER ASSOCIATES
Products Used
MACCAFERRI BARRIERS
Date of Construction
NOVEMBER 2011