

LEARNING TO DEVELOP, INNOVATE, LIVE
AND WORK IN ANACONDA'S SUPERFUND.



NEW BUSINESS TO REUSE ANACONDA'S SLAG

A new business will be opening its doors this year in Anaconda to process slag for use in the natural resource extraction industry. A by-product of the smelting process, slag consists mainly of copper sulfide, copper-iron sulfide, and copper-arsenic sulfide. The black, glass-textured material also contains lesser amounts of zinc, cadmium, lead, and silver; however, the material gets its color from manganese.

“Premier Industries will process Anaconda’s slag for use in oil fracking and natural gas extraction.”

The slag in Anaconda has undergone a process which chemically fixes the metals and contaminants in a glassy, iron silicate, thereby greatly reducing the mobility of the contaminants and the toxicity of the slag particles.

The only visible pile of slag left in Anaconda is the Main Granulated Slag Pile, an area of approximately 130 acres located east of Anaconda along Montana Highway 1. This pile consists of an estimated 26.5 million tons of slag, roughly half of the total produced. Over 40 million tons of slag were produced during the 100 years of copper smelting and refining in Anaconda.

Premier Industries has secured land within the Mill Creek Tax Increment Financing Industrial District (TIFID) near the Main Granulated Slag Pile where the company will build a plant to smelt the slag into proppant: a rounded, hard material used in oil fracking and natural gas extraction. This process was developed by professors from Montana Tech in Butte, in collaboration with the owners of Premier Industries. It is expected that the new plant will create approximately 100 jobs in the community, while adding to the local tax base.



View of US Minerals operations in Anaconda.

Aside from the creation of proppant, there are a plethora of other potential uses for slag. In 2012, Atlantic Richfield

Company entered into a contract with US Minerals to process and sell slag for use in the roofing and abrasives markets. Slag has been used as a substitute for sand in cement, yielding a water-resistant product of increased strength and durability. It is also used in the production of asphalt to create high stability, skid-resistant pavements.

International interest in the reuse of slag has spurred numerous studies investigating revolutionary methods of repurposing slag. One of these studies found that slag can be used to create inorganic brown and black pigments for ceramics. Calcination – a thermal treatment process used in the decomposition of solid materials – was employed to extract these pigments from the slag.

Slag can also be used as filler for land reclamation and landscaping; the Old Works Golf Course being a prime example of such reuse. The material has also been used as ballast – heavy material placed low in a vessel to increase stability – in trains and ships.

For more information regarding slag or other Superfund related issues, please feel free to contact us at the Arrowhead Foundation by calling (406) 564-5538 or visiting us on the 3rd floor of the Community Service Center (118 East 7th Street) in Anaconda.