

ANOTHER

SLAG

SUCCESS STORY

THE
ALL-PURPOSE
CONSTRUCTION
AGGREGATE

AG-SLAG HELPS RESTORE VEGETATION TO ABANDONED SURFACE MINES

Air-cooled blast-furnace slag fines have been found to be an excellent soil-conditioning material to neutralize the "mine spoil" of abandoned and unreclaimed coal surface mines, as well as current mine reclamation and agricultural land.



Reclaimed with no topsoil

Lack of topsoil, plus steep grades, poor drainage and acidic ground, all make revegetation difficult and costly. In Ohio alone, there are over 200,000 acres of unreclaimed strip-mined land needing major reclamation.



Untreated mine spoil



AG-SLAG spreads easily

A 52-acre abandoned site near the Youngstown, Ohio metropolitan area, known as the Woodworth Pits, was reclaimed in 1986 costing \$366,680.00. The Ohio Department of Natural Resources approved the use of AG-SLAG liming material spread at the rate of seven tons per acre. This land was void of topsoil; with a highly-acid soil pH of 3.8-4.1, it had not supported vegetation since the early 1950's. After contouring the ground of clay, shale and rock, the AG-SLAG was applied in May 1986, seeded and mulched with straw in June, and by August was flourishing in grass and legumes. In December, the soil pH was up to 6.1, high enough to sustain plant life and eliminate acid water runoff.

AG-SLAG has a high neutralizing power, equivalent to 98-100% calcium carbonate. This product is made by rescreening AASHTO #10 slag fines over a power screen to permit a nominal top particle size of #8 mesh. The coarse-size fraction is popular as ice-control grits. AG-SLAG does not have a high moisture content and spreads nicely.

These abandoned mine lands are being prioritized for reclamation under a program administered by the State Department of Reclamation and the Federal Office of Surface Mining. Funds are provided by state and federal severance taxes on current coal mine production.

Most abandoned strip mines have pyrite-laden shale and infertile, impermeable clay on the surface and thus are not self-correcting by time or Mother Nature. The pyrite, iron sulfide, continues to react with oxygen and water to form dilute solutions of sulfuric acid which also contain toxic dissolved metals. "This contaminated water, known as acid mine drainage, is the single most significant problem associated with surface mining", according to David Buchanan of the State of Ohio Division of Reclamation.



Reclaimed mine spoil

Local government township officials and Ohio Department of Natural Resources officials are very pleased with the results at Woodworth. This site was listed as one of the 53 most hazardous abandoned mine areas in the nation. Now the area has a grass and legume vegetative cover. The mine spoil is being converted into a lake with gently sloping banks and good water quality for a viable wildlife habitat.