

IOR Processing Plant Opens

In April 2007, IOR opened an iron oxide processing facility in Corsica PA (Clarion County). The site was a former glass recycling facility and its large concrete surface, bins, loading dock, building, and access to I-80 were very attractive as a



location to receive and process iron sludge. The summer of 2007 was spent on repairs, cleanup, and modifications. In July the first deliveries of raw iron sludge were received and IOR set to work on developing passive drying techniques. A method for achieving 60–70% solids was developed and approximately 400 tons of the product were

produced and stored in a covered bunker. In 2008, IOR will continue to refine its passive drying techniques and also develop capabilities for the production of a clean screened product in bulk or one-ton supersacks.



Wilson Site

A major new source of iron oxide was developed in 2007 at the Wilson Run Site in Westmoreland County PA. A major mine drainage discharge exists at this location that was targeted for treatment by the Sewickley Creek Watershed Association. During the





installation of a treatment system, iron sludge from an existing pond was pumped into sludge disposal basins. In August, IOR mobilized in its newly purchased Priestman excavator and began to dewater the sludge through stacking and windrowing. In July truckloads of material began to leave the site for delivery to the Clarion processing plant or to Hoover Color Corporation. As soon as

weather conditions allow, IOR plans to resume iron removal operations. When completed, IOR will reclaim the basins. All sludge removal activities at the Wilson site have fully financed by IOR.



Lowber System



In autumn 2006 the world's first passive mine water treatment system designed to produce a clean saleable iron oxide product became operational. The system is located in Lowber PA (Westmoreland County) and treats a 1,400 – 2,400 gpm discharge of iron-polluted water from the abandoned Marchand coal mine.

The system was built with grants to the

Sewickley Creek Watershed Association from the PA Department of Environmental Protection. The project was managed by IOR. The system design follows IOR's patent on the production of pigment-quality iron oxide from mine drainage. IOR has monitored the system since its installation and the results are impressive. The final discharge has averaged less than 1 mg/L Fe, wetlands



included in the system have become a waterfowl refuge, and the quality of Sewickley Creek is the best in at least a century. The iron oxide production ponds are collecting one ton of iron oxide every day. IOR expects recovery of iron oxide from the ponds to occur in 2013.

The system's dedication can be viewed on YouTube. To view, just copy and paste the following link: <http://www.youtube.com/watch?v=NhBhPTIrVe0> or



search "Marchand passive treatment system". A paper describing the first year of the system's performance is due to be published soon. Watch the website for a copy. We will post a PDF as soon as it comes out.



Green Building Alliance Project

A treatment system that produces clean water *and* pigment-quality iron oxide from polluted mine drainage is truly remarkable. Unfortunately, not all iron sludge collected from mine water has good pigmentary characteristics. IOR is working with the University of Pittsburgh on a project to investigate the physical and chemical basis of pigmentary characteristics in iron oxides produced from mine water.



The project is funded by the Green Building Alliance of Pittsburgh's Green Building Products Initiative. Through the project Dr. Rosemary Capo and her

students in the Department of Geology and Planetary Sciences will develop pigment measuring capabilities. IOR is providing guidance on the formation of iron oxides in mine water environments and providing samples. Hoover Color Corporation has generously donated equipment and is assisting with quality control.

For More Information

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