



PM POWER GROUP RECOVERS COPPER CATHODE FROM KEWEENAW STAMP SANDS

PM Power Group (PMPG), owner of White Pine Copper Refinery, has been working for some time developing a lab scale project to extract the copper from the stamp sands causing problems on Buffalo Reef located near Gay, Michigan. Earlier this year, PMPG was able to recover copper from the stamp sands and plate out a copper cathode on a lab scale, dubbed PM Recovery System. Currently, working under a State of Michigan Rural Development Fund Grant – Revitalization of the Electro Metal Electro Winning at White Pine Project, PMPG along with Subterra, Greensands and MTU, is in the process of taking the lab scale project to a full pilot project to process full size copper cathode from the stamp sands over the summer months.



Illustration 1: Copper Cathode recovered from Stamp Sands at White Pine Copper Refinery.

The goal of the PM Recovery System pilot project is to determine the economics of cleaning the copper from the sands and placing it in an environmentally sound state to ensure it will never reach Lake Superior or impact the ecosystem again. We are also evaluating the residual sands for vegetation and beneficial reuse once the copper is safely removed from the sand. PMPG is of the opinion that the long term benefit to the region and cleanup of the stamp sands in the Keweenaw is to maximize beneficial reuse of the stamp sands by recovering the copper, utilizing as much of the stamp sands in reuse whether it be road fill, sand blasting, or other beneficial reuse that can be coordinated on White Pine's plant site and then permanently store the remaining residual in an appropriate storage site. White Pine



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29639 Willow Road, P.O. Box 695, White Pine, MI, 49971 · Phone: (906) 885-7100 · Fax: (906) 885-7400 offers significant assets and a permanent solution that can be utilized for the long-term cleanup of this problem. By the end of summer PMPG expects to have made significant progress on its pilot project and have produced full size copper cathodes from the 20 tons of stamp sands acquired earlier in 2019.

PM Power Group appreciates the support from Ontonagon County, the MEDC, KEDA, Michigan Works, the DNR, EGLE and all our residents and representatives. We've worked hard to develop a project utilizing the installed assets in White Pine and look forward to bringing jobs back to Ontonagon county while cleaning up an environmental issue in the Upper Peninsula.



Illustration 2: Copper Cathode recently pulled from the pilot testing in White Pine.