Destruction and Vitrification of Asbestos Contaminated Material Using Plasma Arc Technology

Many public buildings in the U.S. contain sprayed or troweled-on asbestos and the removal and disposal of this asbestos contaminated material (ACM) generates large amounts of hazardous waste material which can only be deposited at selected Class I EPA approved landfill disposal sites. In this Construction Productivity Advancement Research (CPAR) project, plasma arc technology was used to thermally treat ACM after its removal from a building, and to safely and efficiently convert the ACM from a hazardous waste to a useful construction material. The resulting innocuous ceramic material no longer requires Class I disposal, and the plasma processed rock-like substance meets all EPA criteria as a non-hazardous material and has value as gravel or construction aggregate.

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