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**From:** [REDACTED]  
**Sent:** Friday, May 17, 2013 3:08 PM  
**To:** Lee M. Gordon; Moira.N.Maloney@wv.doe.gov  
**Subject:** Exhumation Work Group

Lee and Moira--

In case you'd prefer to receive an email directly from me on this recommendation (or you can let me know any other preferred procedure), I recommend that the Exhumation Work Group investigate the possibility of using a miniature version of a tunnel boring machine (TBM) for NDA and/or SDA exhumation. I don't know whether this is a novel idea that would need to be developed or whether existing equipment could serve the purpose with minimal modification. A major advantage of using some type of TBM is that the existing ground surface would remain substantially intact, thus preventing airborne releases of contamination and minimizing radiation dose to nearby workers. A potential disadvantage would be the likely mechanical complexity of a TBM and the dose impacts of repair and maintenance. In any case, I recommend that the Exhumation Work Group explore and evaluate how a TBM might be used for exhumation.

--Ray