



Appalachian Region Technology Team Teleconference January 9, 2017

PARTICIPANTS:

John Carey, Maryland Bureau of Mines (MD BOM)
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Ben McCament, Ohio Department of Natural Resources (OH DNR)
Joe Montrella, Office of Surface Mining, Appalachian Regional Office (ARO)
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Jeff Trump, Office of Surface Mining, Appalachian Regional Office (OSM ARO)

PRESENTATION:

A copy of this presentation is attached.

Nicole Iannacchione began the gotomeeting/teleconference call with a powerpoint presentation on a field report on the Ambrose Mine/Void/Open-Pit Volume Estimates. This mine is located near Kittanning, PA. Joe Montrella, Brian Farmer, Brian Daily, and Nicole Iannacchione were those persons working on this project. The purpose of this was to provide the inspection staff (OSMRE, State, AML) with a reliable and accurate void or open-pit measurement in a reasonable timeframe. This would allow inspection staff to determine whether or not the operation was within compliance of the performance bond.

The method used to develop this measurement first required the creation of two surfaces (pre mining and present) and allowing Global Mapper software to calculate the difference between the two surfaces. OSMRE obtained the pre-mining (2006-2008) land surface Lidar data from the PASDA site (<http://maps.psiee.psu.edu/ImageryNavigator/>). OSMRE then digitized the contours from reclamation map and/or USGS topo map.

In the field, data was collected using enough positions (data points) in order to create an accurate surface (ie. grid) of the open pit area. Points were taken with a laser ranger finder, and a Trimble GPS Pathfinder. The Pathfinder software performs the differential correction for better accuracy, and creates a shapefile of positions to import into Global Mapper.

CONCLUSIONS:

- Estimated total open void for the two open pits at the site was 284,722 cubic yards. The estimated volume was significantly greater than the volumes the inspectors had estimated.
- During the site visit, OSMRE did NOT take background points using the GPS unit.
- Background points are taken at locations near the permit boundaries that are undisturbed by mining activities. These background points allow for a more accurate overlay of the pre-mining Lidar layer in the Global Mapper program.
- Positive and negative conclusions on the equipment utilized are listed in the presentation, however, based on the finding gathered from the Ambrose Mine site visit, the following areas need improvement for the next site visit:
 - Collect as many points as possible, including background points.
 - Develop a field guide for syncing devices and collecting points.
 - Download the Spike application for the mobile device.
 - Collect similar points using both data collection processes and then compare the results
 - Take more notes during the site visit and take more photos.

STATES REPORTS:

Since our face to face meeting, there is nothing new to report from States reports, except beginning Feb 6, 2017, the hours for the Big Stone Gap and Lebanon offices in Virginia will be changed to:
The new office hours for the Big Stone Gap and Lebanon offices will be Mon-Thurs 7:00 AM – 6:00 PM.
These offices will be closed on Fridays.