

UAS Pulp Landfill and Ash Bark Pile Survey

Client Domtar	Services UAS Missions, UAS Data Processing, Survey Reporting	Location Baltimore, MD Germantown, MD	Date 2015
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UAS survey of pulp mill landfill and ash bark pile

AECOM was tasked by Domtar, one of the largest manufacturers of uncoated freesheet paper in North America, with utilizing UAS for surface elevation information covering a pulp mill landfill and ash bark pile. Prior to this project, the surveys required on this site were performed by survey teams on the ground. Gathering elevation information from within the landfill and on the ash pile was hazardous, yet required to better understand the settling at all the sites.

Using a UAS, AECOM flew this site to capture imagery for photogrammetric processing. Detailed orthophotography, point clouds, digital elevation models, and contours were created. Domtar required that the new surface elevation data be incorporated into existing volume reporting so engineers ingest the UAS derived geospatial data and provide the required reporting. Previous site surveys had required the teams to capture in excess of 5000 survey points to generate the needed contouring. AECOM was able to leverage Structure from Motion (SfM) processing algorithms to reduce the needed number of survey points to 16 control points across three sites. Independent checks of the UAS derived surface resulted in a vertical RMSE of less than 3cm.

