



DMM Safety Alert:

Flyrock Impacting Highways

Two flyrock incidents have occurred at Virginia mineral mines in 2013. On both occasions flyrock was thrown onto a busy highway where traffic had not been stopped prior to initiating the blast. In May, flyrock traveled approximately 400 feet striking one vehicle and damaging another when it ran over a football size rock that had landed in the highway. In August, flyrock traveled approximately 1,200 feet and landed in the roadway; no vehicles were struck or damaged in this incident. Fortunately, no one was injured in either of these incidents. Mine operators and blasters are reminded that rock is capable of traveling considerable distances. In a 2005 incident in Virginia, rock flew 1,400 feet and penetrated a commercial building's roof. In 2007, rock traveled 1,700 feet and landed near a primary crushing plant that was in operation. It is the duty of the certified blaster to delineate the blast area, which should include all areas on and off the mine site, including highways, that might be impacted by flying material. Virginia Safety and Health Regulations for Mineral Mining, **4 VAC 25-40-830**, states, “ prior to blasting near a mine haul road or public highway, traffic shall be stopped at a safe distance”. Blasters can minimize the risk of flyrock through careful planning and by following the recommendations below, especially when blasting near highways.

- Blasters should pay close attention to stemming issues with top level shots when there are varying amounts of weathered or unconsolidated material present.
- The blaster must closely examine the drill log and blast site geology and make appropriate adjustments when loading to account for significant changes in geology.
- When angled holes are used, the blaster must be certain that the burden and spacing has not been affected by improper drill set up or drill string wander.
- Regardless of actual distance, if there is anything about the shot that causes the blaster concern, traffic on nearby highways must be stopped at a safe distance. Personnel performing traffic control must be certified by VDOT and follow their procedures.
- Certified blasters and mine management must always remain aware of their responsibility for blasting effects on and off the mine site.



Busy highway impacted by recent flyrock incident