### Kentucky Professional Engineers in Mining Seminar Dr. Braden Lusk, PE University Of Kentucky Mining Engineering Department

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# FLYROCK





## **Prevention Tips**

#### • Confinement through...

- Design
  - Burden, Spacing, Stemming... on paper.
- Execution
  - Same parameters on a remote bench.
- AS BUILT = AS DESIGNED???
  - B 3 Examples of where it is not...
    - Standard Pattern There is no excuse for this when homes are nearby.
    - Burden at the Face Where are we drilling?
    - Stemming Designed with Cuttings?



## Engineers involved?

- Part 24 of the permit package is the Blast Plan
  - Licensed Blasters must follow the nonsense that engineers have planned for them.
  - Don't forget the blaster in charge is ultimately responsible and thus in charge when it is time to blast.
- SMP-61 Anticipated Blast Design
  - Required when blasting within 1000 feet of dwelling, etc... or 500 feet of an abandoned deep mine.
- SMP-60 Joint MSHA Approval
  - Within 500 feet of active deep mine
- Other times to a lesser extent
  - Pit Design Does the pattern fit evenly into the pit width?
  - Mine Design Where is access, bench location, facing?

LIABILITY IS BECOMING MORE OF AN ISSUE!!!!



## Flyrock Task Force

MISSION: Reduce and finally eliminate the occurrence of blasting-based flyrock incidents in all industry sectors in Kentucky. The mission will be accomplished through identification of the root causes of flyrock.

TASKS:

- Identify the causes of flyrock incidents based on analysis of historical data
- Identify the actions and activities necessary to prevent the causes of flyrock incidents in the future
- Communicate the framework necessary to deliver the preventative measures to the relevant parties and industry sectors.

## MEMBERS

- Marty Vincent, Owen Yocum, Richard Hamilton, Dave Blankenship, Forrest Shelton, Jeff Taylor, and Julian Smith
- Representing all interested industries.
- Associations have Pledged Funding to Begin the Work
- Contact me for details in order to...
- Contribute Information?
- Contribute Funds?

## Videos???