

# Surface Mine Blasting Plans

Raymond Hudson - Kentucky Explosives and Blasting  
Branch

(606) 205-4117

In search of the mythical  
“Perfect Blasting Plan”

# Plan 9 (from Outer Space)

- 100% elimination of FLYROCK
- 100% elimination of blasting safety issues
- 100% elimination of adverse effects of blasting on the public
- 100% elimination of blast complaints
- We can eliminate inspector positions and save money
- What is the “PLAN” ?
- DO NOT BLAST.
- Simply dig the rock without blasting
- How's that working out ?



**Not Too Good !**

# One man's observations of Explosives and Blasting In Eastern Kentucky

- In the 1950's-Dynamite in the smokehouse
- In the 1960's- ANFO makes an entrance  
(P.S. Dynamite is still in the smokehouse)
- In the 1970's-Blasting starts to get serious
- In the 1980's-Cast blasting comes of age
- In the 1990's-Blasting moves near homes
- In the 2000's-Flyrock strains the friendship

# Where did the Blast Plan fit in

- Regulators worked very hard in cumulative efforts to guide Industry towards better Blast Plans that would ensure safer and more efficient blasting.
- Industry seemed generally pliable and for the most part receptive towards the input. Industry worked to generate professionally prepared Blasting Plans.

# The Intended System

## (a good system)

- Blasting plans were prepared by a licensed blaster.
- Blasting plans were site specific and were compiled after much research and mine planning considerations, in order to have the safest and most productive plan possible.
- The Blaster was the pivotal figure in all blasting plans and was considered to have the final authority on blasting issues.
- The Blaster was fully aware of every detail of the blasting plan and followed them faithfully.

# Reality

- Who really prepared the blasting plans?
- Were they qualified to do this?
- Just how intimate were they with the blasting issues and mining needs?
- How accurate were the plans in relation to the actual blasting?
- To what extent was the Blaster usually involved?
- How well informed, as to plan details, was the actual blaster?
- Where did they get their information?
- Their information came from “The Magic Box.”

# The Magic Box



# Why were these things so?

- Why did all of these people allow the system to operate in this way?
- How could it be that something as important as a “Blast Plan”, could be treated as of so little value?

# Reasons

- Blaster's reason – He had a fulltime job
- Preparer's reasons – It was easy and made them look needful
- Company's reason – They just needed to get to work (The quicker the better)
- Regulator's reasons – They needed a properly prepared document and they had less control over the situation than they needed (It was the only tool they had)

# THE REAL PROBLEM

- We see that the real problem has been; not so much “The Blasting Plan”, but actually in the application of the “Plan.”
- Experienced Blasters knew that one hole an inch and a half in diameter could throw flyrock hundreds or even thousands of feet.
- This made the Blast Plan seem ridiculous to experienced Blasters.
- The entire Blast Plan was viewed as “not in touch with reality”, and critical issues were disregarded.

# Questions we ask the Blaster

- Are you the Blaster
- Do you have a copy of your Blast Plan
- Not the SMP-61, not the Anticipated Blast Design – the actual “Blast Plan”
- Do you know what it says
- Are you following the Blast Plan to the letter
- Do you realize you could have some serious violations if you are not following every detail

# Answer these questions

- Are you married
- Do you have a copy of your marriage vows
- Not the marriage license – the actual “Marriage Vows”
- Do you know what they say
- Are you following the Marriage Vows to the letter
- Do you realize you could have some serious violations if you are not following every detail

# Good News

- All of this is changing – KY DNR/ Explosives and Blasting Branch understands the situation and is implementing changes in the way plans are viewed
- We know what we need
- Blasters are now being required to be familiar with the blasting plan
- Companies are being required to make the Blaster familiar with the blasting plan
- Drilling and Blasting Supervisors are a good starting place in bridging the gap (They can be the go-between, the mediator, between Regulators and Blasters)

# Obstacles

- Job security issues
- Control issues
- Application
- “Nothing is really idiot proof to a thoroughly efficient idiot”
- Any blasting plan will still depend upon the people putting it into practice

# Idiot proof ?

- How to make a bologna sandwich
- Get a loaf of bread, a jar of mustard, and a pack of bologna (say baloney)
- Take two slices of bread from the loaf
- Put the mustard on the bread
- Put the bologna on the mustard
- Fold the bread together

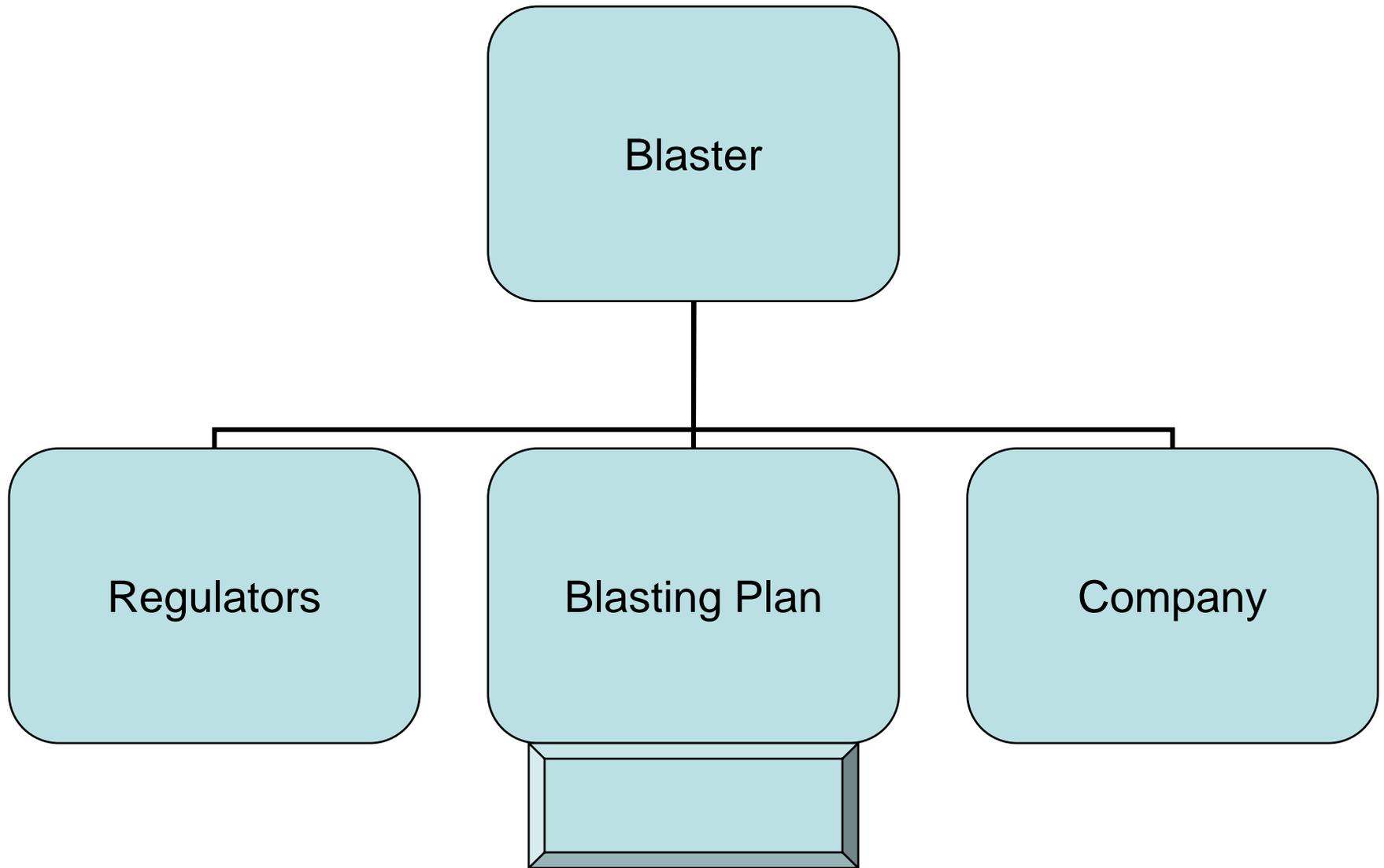
# Today's Blaster



**Authority**

**Responsibility**

# Communication / Co-operation



# Questions

Thank You

Have a blast !