

# **ATLANTIC ALLIANCE CONFERENCE**

**CAMBORNE SCHOOL OF MINES  
UNIVERSITY OF EXETER IN CORNWALL**



**BEST PRACTICES**  
**Regulatory & Producer Approach**

# What is a Best Practice?

- Proactive
- Reactive

# Regulator & Producer Approach

- Is there common ground?
  - Need to eliminate adversarial position
- It's all common ground
  - The Mine Act states the miner is the “most valuable resource”
- Safe production happens to be the least expensive way to product aggregates



**Sometimes we face the unexpected,  
but we *can* train for known hazards**



## SAFETY NETWORK ALERT



A picture is worth a thousand words. Our Hazard Training documents warn visitors to our sites of the dangers of working around heavy equipment. The situation above occurred at a (non-Hanson) Texas mine in January of 2002. The company welding truck was parked in front of an idling haul truck to perform minor repairs during the lunch break. The welder assumed that the driver had left the vehicle for lunch. The driver was in fact having lunch in the cab. Since the welding truck was parked in the blind spot of the truck the operator was unaware of his presence and drove straight over the welding truck. Luckily the welder was not in his vehicle.

Our personnel should be reminded to make radio and eye contact with equipment operators if they need to approach. Whenever practical, service equipment should be parked on the driver's side, with a clear line of sight established with the operator. Never park directly in front of, or directly behind any piece of off-road equipment. Vendors and outside contractors need to be advised of the significant blind areas around heavy equipment. A copy of this Alert should be posted in the area where contractors receive their site specific Hazard Training.

We have had the occasional personal injury and vehicle damage arising as a direct result of vehicles parked in equipment blind spots. Please use this alert with its dramatic impact photos to reinforce the message that an on-road vehicle will always lose an argument with off-road equipment.

## SAFETY ALERT

### PULLING/TOWING TRUCK SAFETY



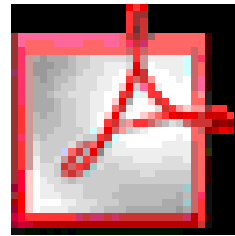
#### **Bystanders should always be cleared from vehicle recovery scenes.**

During such activity recently, one of Hanson Concrete South Central's competitors experienced the death of a salesman. A second ready mix truck was attempting to extract a ready mix truck that had sunk into soft ground, an all too familiar scenario. The second truck backed close to the disabled truck and a nylon towing strap was attached to the rear hooks of each vehicle and the power was applied.

The bolts holding one of the hooks sheared and the hook broke loose and flew toward bystanders, striking the salesman in the head. An Air Ambulance was summoned, but the salesman was pronounced dead at the scene.

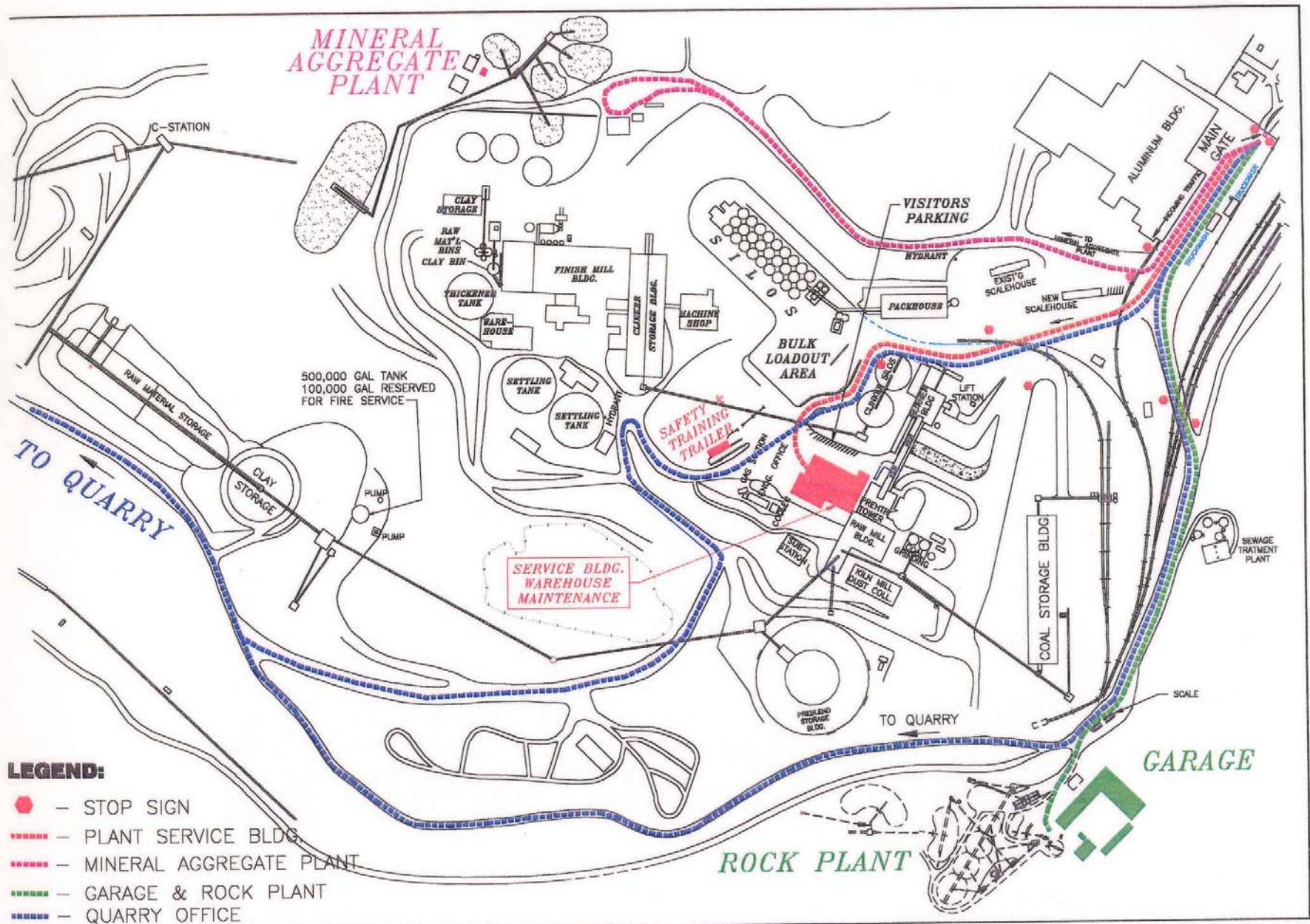
There have been other recent non-fatal accidents of this nature in the Dallas / Fort Worth area. Please use this incident to reinforce the message that bystanders are to be removed from the area before attempting to retrieve any stuck vehicle.

Know the limits of straps, hooks, cables and chains before attempting to perform this type of activity. Understand that the effort needed to extract a stuck unit can never be calculated with any degree of certainty. The angle of the pull will affect the stress placed on the towing eyes and hooks. The efficiency of the pull is exponentially reduced as the angle from a straight pull is reduced (or increased). The same laws of physics apply to pulls that are off center. Applying an angled pull between non centered hooks is an invitation to disaster and this is the most common on-site towing scenario. Extraction from an axle-deep situation should be left to a suitably equipped recovery professional.



# Hazard Training Form







Natural building blocks for quality of life

Safety & Health Committee  
**SAFETY ALERT**



Fall from Height

March 2004

There has been a spike in fatalities resulting from "falls from a height". Already in the first quarter of 2004 the number exceeds the total for the past two years. As a direct result there is evidence that MSHA is quite rightly placing special emphasis on this problem. Although only one of the 2004 fatalities involved a trucker climbing on his rig (in fact a tanker), truckers appear to be the main focus of this program. This is an appropriate time to review and reinforce loading and tarping practices at your locations. If you do not have clear cut guidelines in place, some producer members on the Safety & Health Committee have offered to provide you a template.

**METAL/NONMETAL DAILY FATALITY REPORT - March 25, 2004**

FATALITIES CHARGEABLE TO THE MNM MINING INDUSTRY	2000		2001		2002		2003		2004	
	UG	S	UG	S	UG	S	UG	S	UG	S
ELECTRICAL	0	0	0	0	0	0	0	0	0	0
EXP VESSELS UNDER PRESSURE	0	0	0	0	0	0	0	0	0	0
EXP & BREAKING AGENTS	0	0	0	0	0	0	0	0	0	0
FALL/SLIDE MATERIAL	0	0	0	0	0	1	0	0	0	1
FALL OF FACE/HIGHWALL	1	0	0	0	0	0	0	0	0	0
FALL OF ROOF/BACK/RIB	0	0	1	0	0	0	0	0	0	0
FIRE	0	0	0	0	0	0	0	0	0	0
HANDLING MATERIAL	0	0	0	0	0	0	0	0	0	0
HAND TOOLS	0	0	0	0	0	0	0	0	0	0
NONPOWERED HAULAGE	0	0	0	0	0	0	0	0	0	0
POWERED HAULAGE	2	3	1	2	0	3	0	0	0	0
HOISTING	0	0	0	0	0	1	0	0	0	0
IGNITION/EXPLOSION OF GAS/DUST	0	0	0	1	0	0	0	1	0	0
INUNDATION	0	0	0	0	0	0	0	0	0	0
MACHINERY	0	2	0	0	0	3	1	0	1	2
<b>SLIP/FALL OF PERSON</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>
STEP/KNEEL ON OBJECT	0	0	0	0	0	0	0	0	0	0
STRIKING OR BUMPING	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	1	0	0
<b>YEAR TO DATE TOTALS</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>9</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>6</b>
<b>COMBINED YEAR TO DATE TOTALS</b>	<b>8</b>	<b>7</b>	<b>9</b>	<b>5</b>	<b>7</b>	<b>26</b>				
<b>END OF YEAR TOTAL</b>	<b>47</b>	<b>30</b>	<b>42</b>	<b>26</b>						

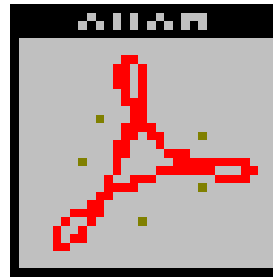
## Brake Failure or Operator Error?



- **Seldom 100% one cause but could training and maintenance avoid the situation?**
- **98% of the time – yes!**

# BEST PRACTICE CASE STUDY

- > A water truck overturns on a ramp
- > Brakes seen as a problem
- > Pre-shift – not pre-operation
- > “Plea Bargain”
- > In house investigation
- > Action = Best Practice going forward



# Brake Repairs and Testing

# Conclusions

Mining is inherently safe, just very unforgiving

- Share Best Practices, there is no copyright<sup>©</sup> on safety
- If it saves injuries at your operations - it will save injuries on any location
- If you have an incident at one of your operations it is a sign of strength not weakness to ask your peers for their programs to jump start your remedial action.
- If you have an accident at one of your operations and find a definitive series of compounding components – share them with your peers.
- Share successes – admit system failures

# **ATLANTIC ALLIANCE CONFERENCE**

**CAMBORNE SCHOOL OF MINES  
UNIVERSITY OF EXETER IN CORNWALL**



**BEST PRACTICES**  
**Regulatory & Producer Approach**