

# Annual Health and Safety Review

## 10<sup>th</sup> May 2011

### IOQ Auckland Branch

#### *Improvements in Health and Safety technology in Mobile Plant*

Presented by Tony Smith

- Generally safety practices have improved over time.....
- .....Or have they !!



Mobile Plant manufacturers take a leaf out of the car industries research and development to make improvements

Eg Air-conditioning improvements.....





- Lighting and reflective equipment.....





- Fuel useage reduction technology.....





- Load carrying ratings.....



# Improvements in mobile plant health and safety

- Exhaust emissions
- Steering
- Braking
- ROPS
- Operator station
- Training
- Communication links
- Noise and sound levels.....



# Noise and Sound levels

## How it used to be.....105dBa



Now....75dBa





Then.....95dBa





Now.....76dBa





## The two factors that determine how hazardous noise is are:

- Intensity (Loudness) measured in dBA
- Time of Exposure measured in Hours and Minutes

The louder the noise, the more hazardous it is. Also, the longer the exposure time, the more hazardous the noise is.

A “Noise Dose” combines both loudness and time and is a convenient way of describing the relative hazard of the noise.

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### Loudness is measured using a Logarithmic Scale.

This means that a 10 decibel increase does not simply add 10 to the previous level. It multiplies the previous level by 10.

Threshold of Hearing.....	0 dBA
Quiet Room.....	45 dBA
Conversation.....	55 dBA = 45 dBA x 10
Car (50 mph at 50 ft).....	65 dBA = 45 dBA x 100
End Loader (In Good Cab).....	75 dBA = 45 dBA x 1,000
Haul Truck (In Good Cab).....	85 dBA = 45 dBA x 10,000
Crusher.....	95 dBA = 45 dBA x 100,000
Old Dozer (No Cab).....	105 dBA = 45 dBA x 1,000,000
Air Track Drill (No Controls).....	115 dBA = 45 dBA x 10,000,000

115 dBA has 10 million times more sound energy than 45 dBA and is capable of causing 10 million times more damage to hearing.

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## **How have manufacturers reduced mobile plant operator dBa levels over the years ?**

- Enclosed cabs
- Better muffler technology
- Turbo chargers
- Fan and fan speed technology
- Compartmentalise components
- Sound insulation improvements
- Transmission gear design
- Improvements in hydraulic design

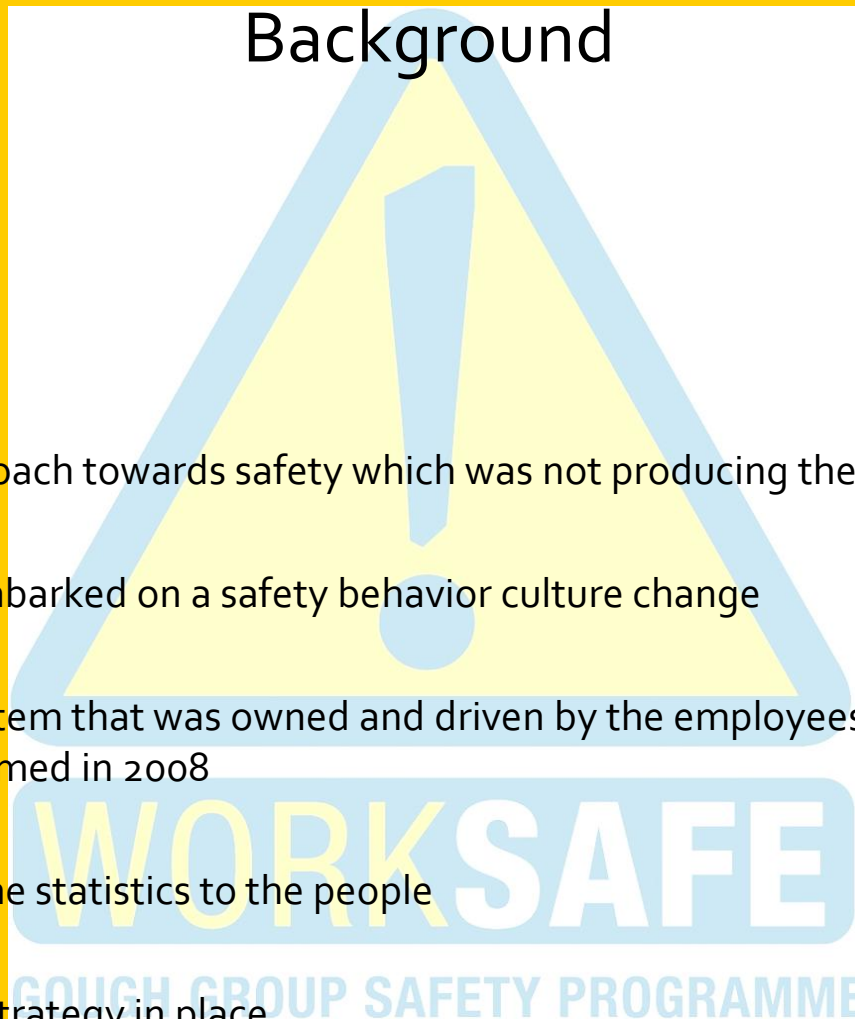
# *Safety initiatives and performance by a Supplier to the Quarry Industry*



Presented by Geoff Wright

# Background

- Goughs 2001
- Had a blanket approach towards safety which was not producing the results we needed
- In 2005, Goughs embarked on a safety behavior culture change
- Focus was on a system that was owned and driven by the employees, the Safety Overview Committee was formed in 2008
- Focus went from the statistics to the people
- We have a 5 year strategy in place





# Highlights

## **Drug and Alcohol Programme**

- design and consulted on Policy with all stakeholders including customers
- trained over 610 employees and 120 managers
- Policy is being adopted positively as part of our “daily lives”
- level 1 and 2 incidents will be tested

## **Safety Coordinator Programme**

- held one day conferences in Auckland and Christchurch to up skill and empower in leadership

## **Newsletter**

- Edition 1 is out with good feedback.
- Edition 2 is coming out shortly with employee suggested changes

## **“At Risk” Behavior Programme**

- enhanced and adding value
- still has room for development in becoming one of our most value safety tools

## **ACC Partnership Programme**

- achieved Tertiary level for sixth year

# **Some policies introduced over the last 2 years by the safety overview committee...cont.**

- **Comprehensive and standardised monthly toolbox meeting packs**
- **Eyewear, footwear, hard hat and PPE policy**
- **Safe working policies and training.....**
  - **Crane operator policy, includes gantry and hiab**
  - **Jacking and blocking**
  - **Working at height**
  - **Working in isolation, including travel policy**
  - **Forklift OSH and F endorsement**
  - **Identified 'at – risk' safety behavior programme**

Gough Group  
LTI Frequency Rate (per 1000000hrs)

