MOSH

LEARNING HUB

MOSH - DUST SLP Workshop

Graham Briggs
CEO of Harmony Gold Mine and MOSH Dust Sponsor
17 July 2013

CHAMBER OF MINES OF SOUTH AFRICA
Putting South Africa First

PROUDLY SOUTH AFRICAN

Contents

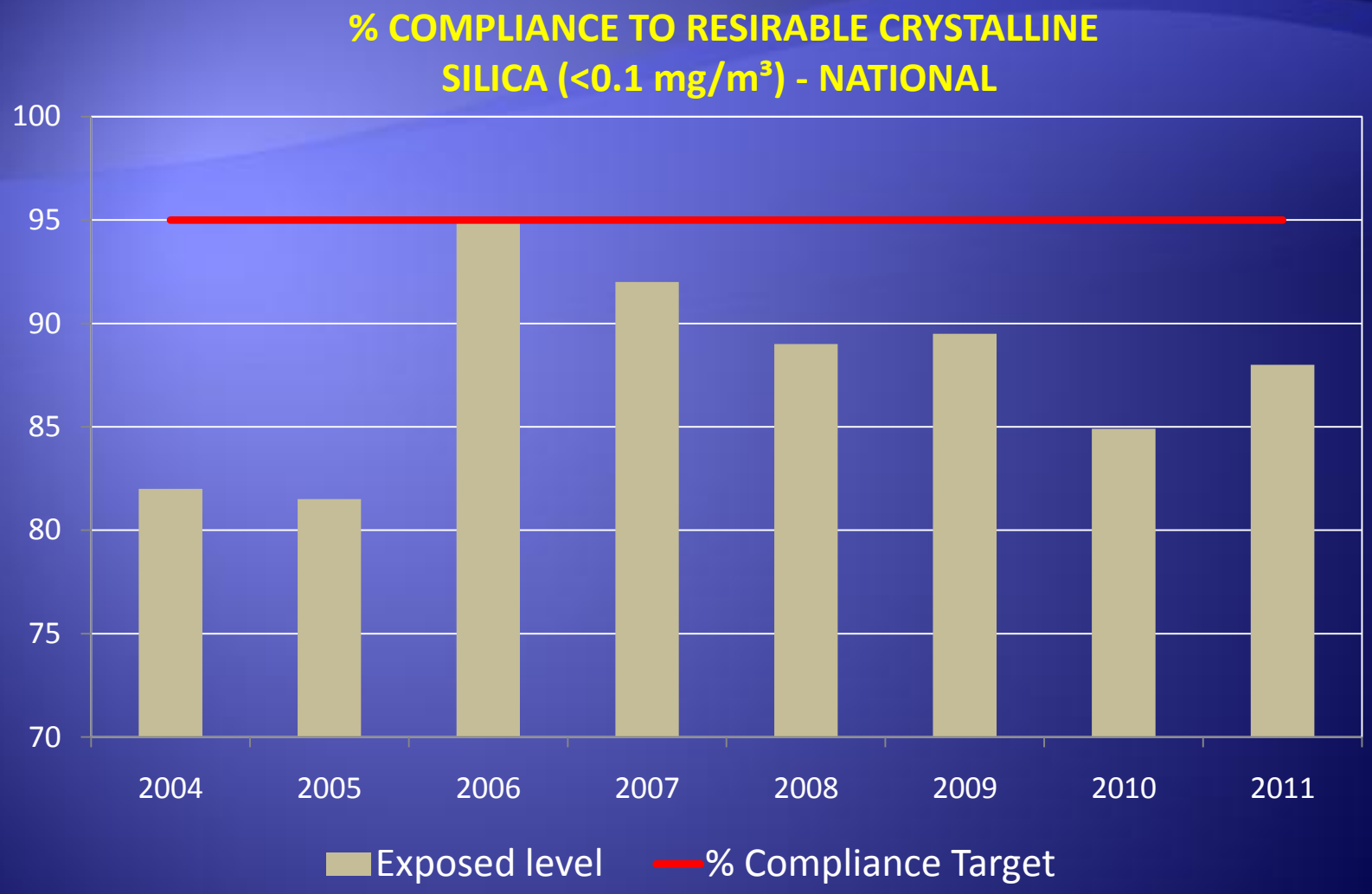
THE HARSH REALITIES OF SILICOSIS

Fact: 1

- Increased risk of developing silicosis with cumulative exposure to respirable crystalline silica equal to or higher than 0.05 mg/m^3
- Disease prevalence rates increase with cumulative exposure of 0.025 - 0.05 mg/m^3
- Silicosis worsens with continued silica dust exposure
- 57% to 67% of silicosis cases occur after retiring from exposure
- We don't know why certain individuals don't contract pneumoconiosis

THE HARSH REALITIES OF SILICOSIS

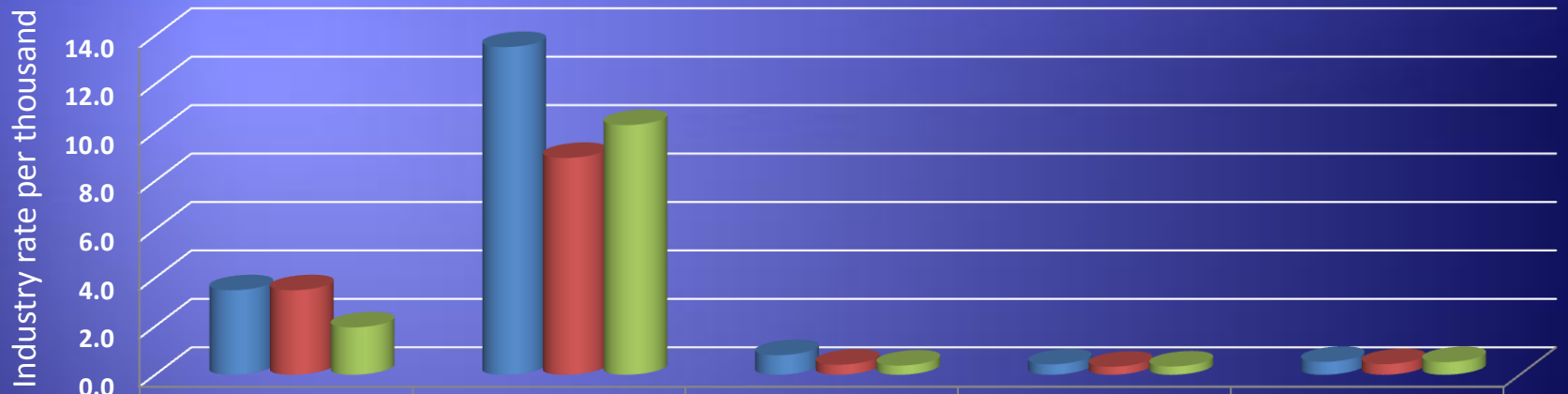
Fact: 2



INDUSTRY PERFORMANCE IMPROVEMENT

Fact: 3 There is an indication of improvement across industry

INDUSTRY'S OCCUPATIONAL LUNG DISEASES PER THOUSAND EMPLOYEES
(Source DMR)



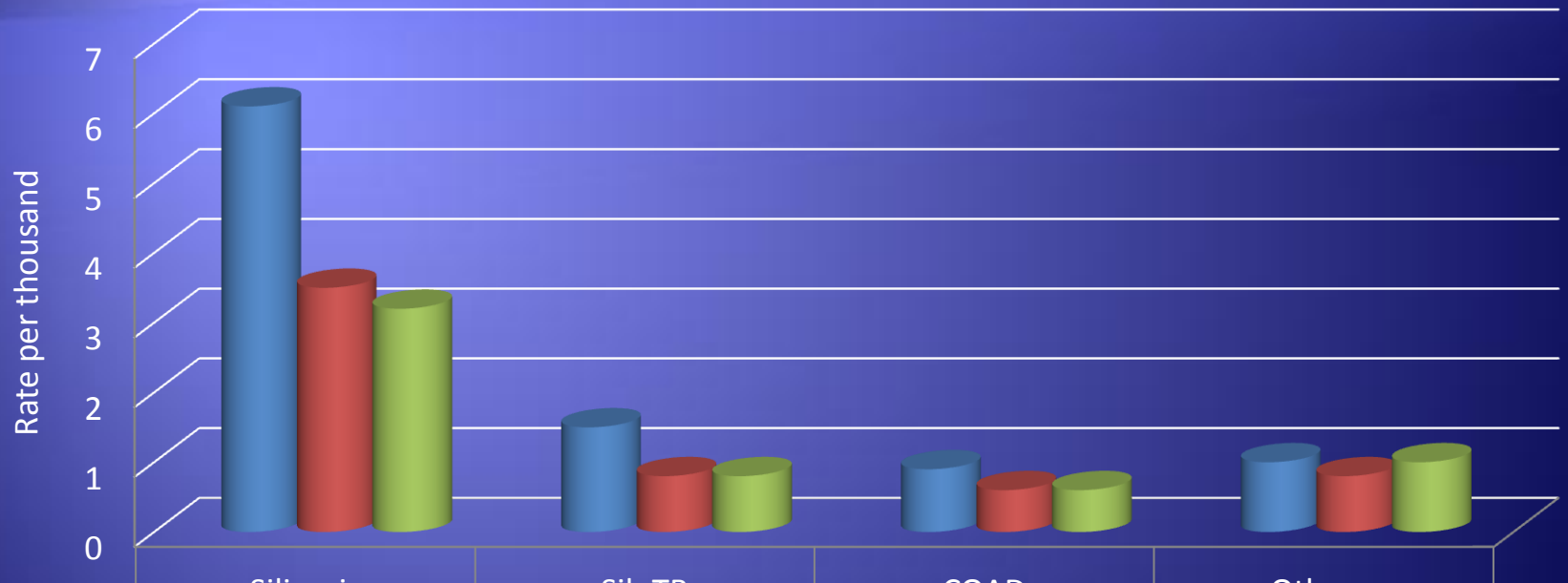
	Pneumoconioses	Pulmonary TB	Silicosis + TB	Chronic Obstructive Airway Disease	Others
2010	3.5	13.5	0.8	0.4	0.5
2011	3.5	9.0	0.4	0.3	0.4
2012	2.0	10.3	0.4	0.3	0.5

Note: Other diseases are reported as non-occupational

INDUSTRY PERFORMANCE IMPROVEMENT

Fact: 3 Improvement also noted across gold mines

RATE OF OCCUPATIONAL LUNG DISEASES PER THOUSAND EMPLOYEES



	Silicosis	Sil- TB	COAD	Others:
2010	6.1	1.5	0.9	1
2011	3.5	0.8	0.6	0.8
2012	3.2	0.8	0.6	1

Note: Other diseases are reported as non-occupational

CRITICAL SUCCESS FACTORS

- Implementation versus people (people centred)
- Performance measurement of practices adopted by industry
- Real Leadership involvement in MOSH activities to turn the tide around
- Honest investigation of MOSH existing (leading or simple) practices and identification of new ones
- Going beyond compliance for in-roads in eliminating occupational diseases
- Tapping into existing Mine Health and Safety research outcomes and develop them into practices

CRITICAL SUCCESS FACTORS (cont.)

- We can achieve this through the MOSH Adoption System that:
  - Is designed to facilitate eager adoption as opposed to reluctant compliance AND implementation
  - Requires an enabling leadership environment

- This requires a multidisciplinary approach

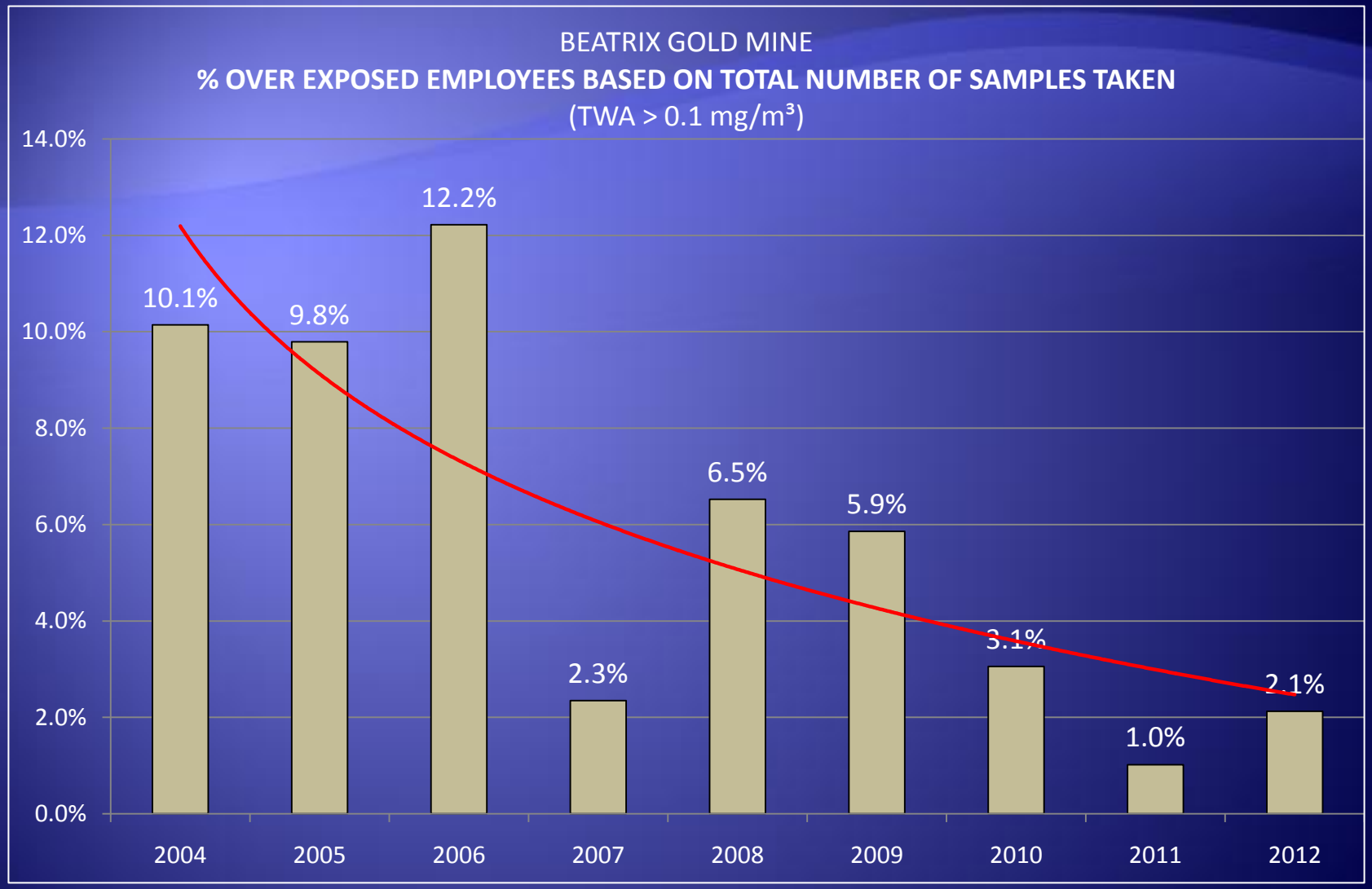
CASE STUDY – BEATRIX GOLD MINE

Dust Management Strategy

- Awareness education
  - Health room, posters
- Footwall and side wall treatment
- Introduction of winch covers
- Haulage sprays
  - Beatrix 3 shaft
- Boxing in of transfer chutes
  - Beatrix 3 shaft
- Tip covers

- dust measuring instruments for environmental engineering staff members
- washing of material cars
- washing of downcast shaft
- tip transfer chute mist spray system
- blasting of station loop
- haulage mist spray system
- washing of hoppers underground

CASE STUDY – BEATRIX GOLD MINE



Concluding remarks: where to from now?

- If you have better approaches to the MOSH practices or
- If you are making inroads in reducing dust

Share with the MOSH Industry Team-Dust

- Surely, you will agree with me that there is indeed, no single "silver bullet" to address the dust problem industry is facing.

THOUGHT FOR THE DAY

When we have become better on controlling or reducing all types of dust, when we are rigidly applying all these methods in all working places, when we have the active support of all mining personnel from leadership to all workers (multi-disciplinary approach) in tackling the dust problem - then I am convinced that we can all say that we done everything morally possible to minimise silicosis and other occupational lung diseases from mining.