



Cananea Copper Mine: is it safe for workers?

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Outline



- Background
- Methods
- Results
- Walk-through Inspection
- Mexican Response
- Conclusions
- Recommendations

Background

- Open-pit copper mine in northern Mexico owned by Grupo Mexico
- 1200 miners + 300 contractors. Miners went on strike in July 2007
- OHS volunteer team organized by Maquiladora Health and Safety Support Network (MHSSN) in October 2007



Background



Methods

- IH questionnaire
- Health survey/Lung function test (Spirometry)
- 68 miners interviewed in two days
- Walk-through inspection



Results

Based on IH interviews

□ Exposures

Chemical Hazards	Silica - 32% Solvents - 24% Diesel fumes - 22%
Physical Hazards	Noise - 90% Vibration - 78%
Safety Hazards	Falls - 94% Machine operation - 73% Machine guarding - 62%

Results

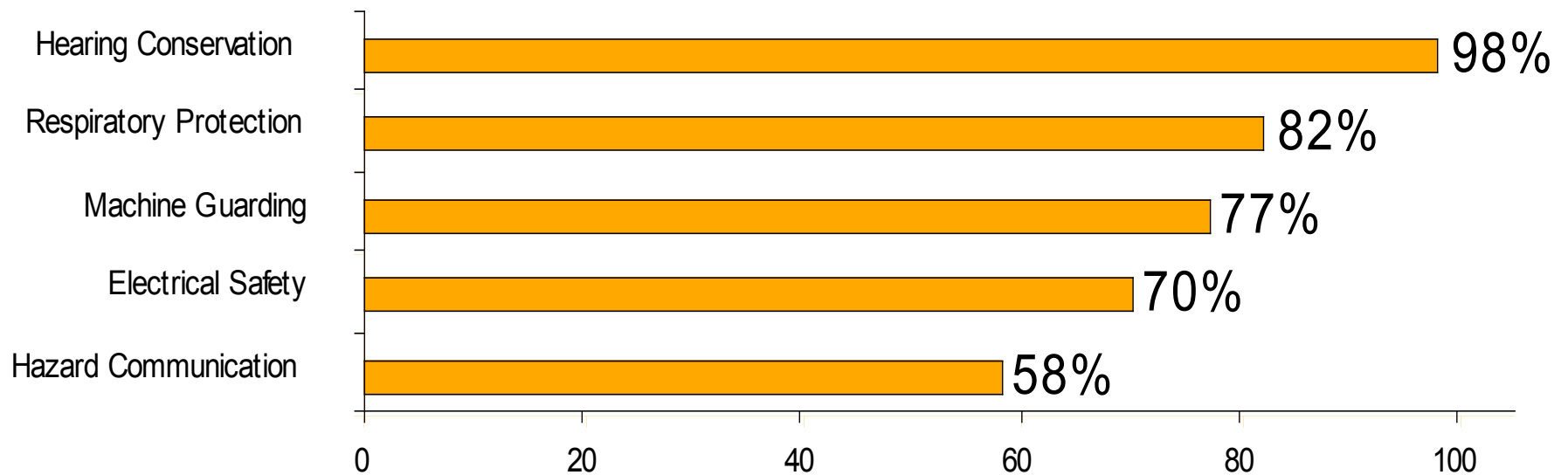


Based on IH interviews

- **PPE**
Inadequate respirators,
Ear plugs
- **Air and Noise monitoring**
Seldom, no changes
- **Medical surveillance**
Physical exam at hiring
No pulmonary or audiometric test
- **Accidents**
From broken fingers to one fatality

Results

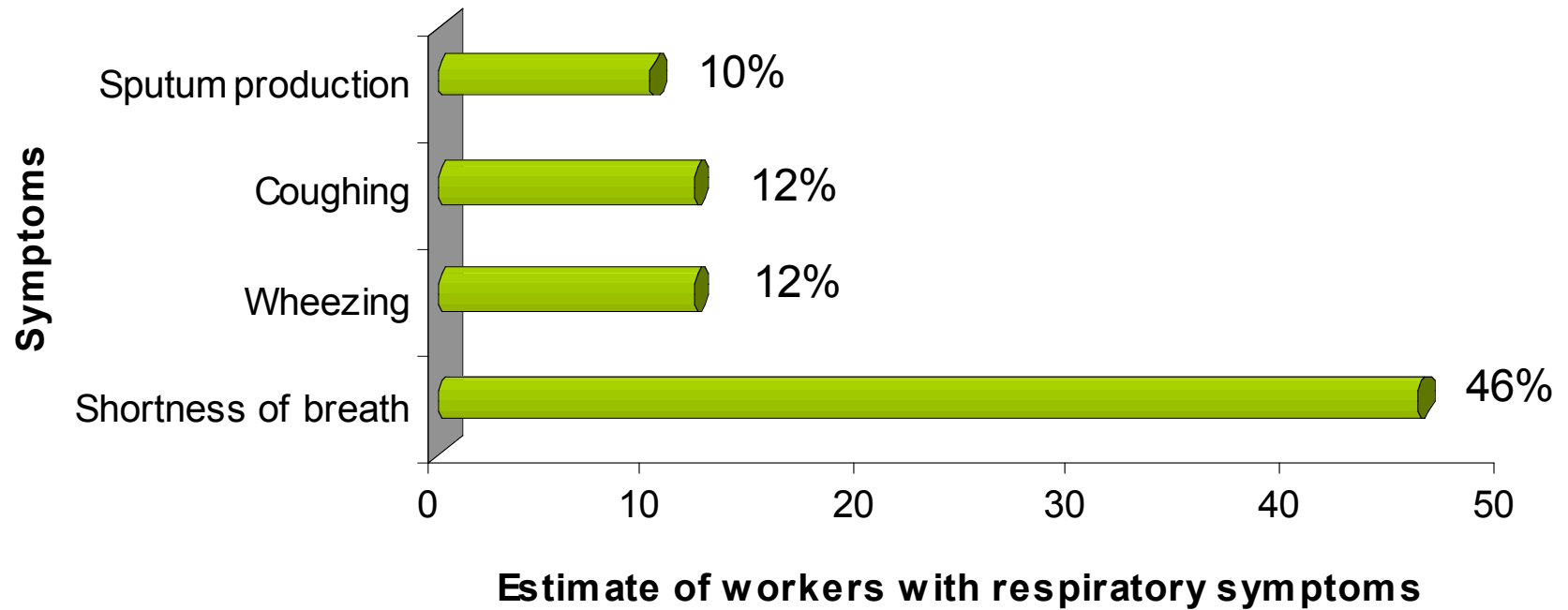
□ Lack of Training Programs



Workers reporting NO training in these specific areas

Results

Based on Health Survey



Walk-through Inspection



- Four areas visited
 - ▣ Mine
 - ▣ Concentrator
 - ▣ Quebalix
 - ▣ ESDE

- Main observations
 - ▣ Chemical hazards
 - ▣ Electrical hazards
 - ▣ Safety hazards
 - ▣ Physical hazards
 - ▣ Poor housekeeping

Walk-through Inspection

Based on bulk sample (accumulated dust)

- 23% quartz silica
- 51% of the dust → respirable range
- 75% of the dust → thoracic range

What does it means?

- Workers are exposed at least to **1.2mg/m³** respirable silica
- Mexican Permissible Exposure Limit **0.1mg/m³**

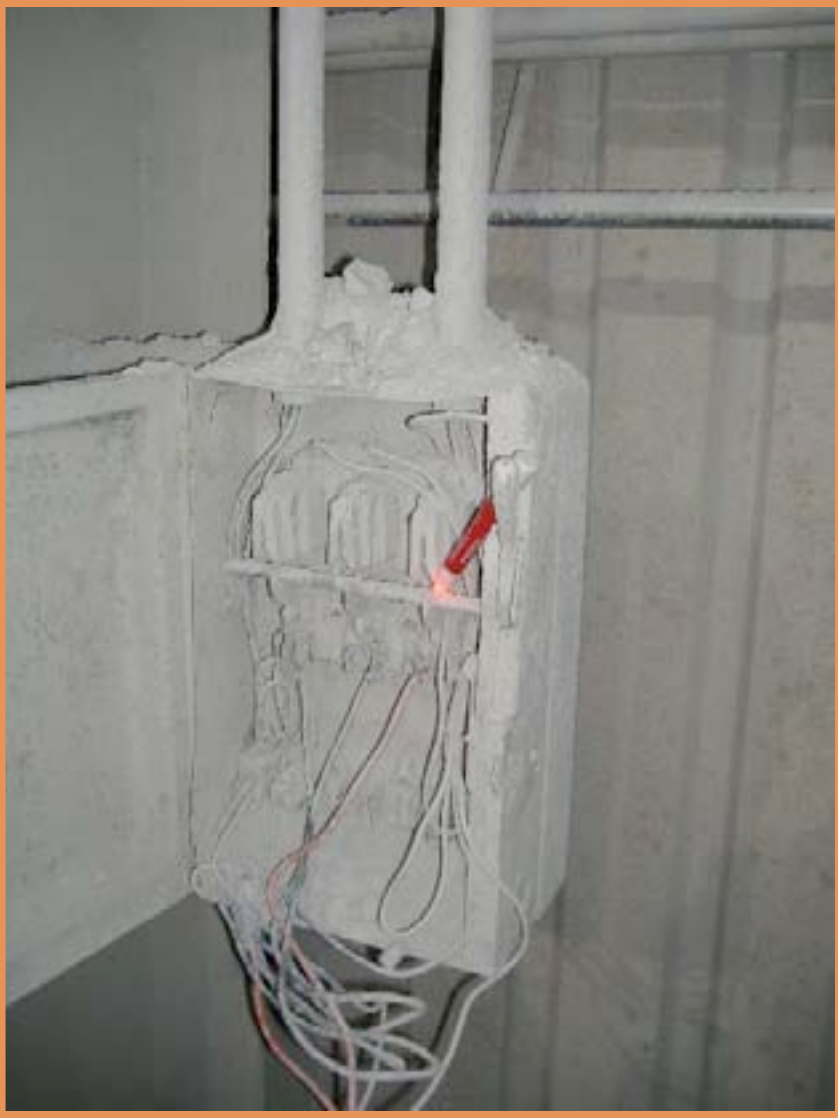
Job Hazards



Job Hazards



Job Hazards



Job Hazards



Job Hazards



Mexican Response



- STPS did a walk-through inspection
April 2007 → **72 required corrective actions**
- OHS team released a report
November 2007
- STPS said the report is not valid
- STPS did a second walk-through inspection
January 2008 → **200 required corrective actions**
- **“Nada de Gravedad”**

Secretariat of Labor and Social Security = STPS Spanish-language

Conclusions



- Grupo Mexico has **failed to provide** a safe and healthful workplace for the miners, **to comply** with health and safety Mexican regulations.
- Serious health and safety hazards that require immediate and long-term corrections to guarantee **basic workers' health and safety rights.**
- The **safety program** has not resulted in effective hazard corrections, accident investigations, and worker training.

Recommendations



- A **massive clean-up operation** to eliminate the most immediate hazards to workers' health and safety.
- Grupo Mexico must initiate a **comprehensive health and safety remediation plan** for the facility.
- Grupo Mexico should initiate a **comprehensive medical surveillance program**.
- Mexican government **must ensure** that workers at the Cananea mine are protected against all regulated hazards.



SOUTHERN COPPER
MEXICANA DE CANANEA

GERENCIA DE MINA



BIENVENIDOS

**SE ENCUENTRA USTED EN LA MINA MAS GRANDE
Y SEGURA QUE TIENE MEXICO**

DEPARTAMENTO DE SEGURIDAD E HIGIENE