



Industry &
Investment

MINE SAFETY

INVESTIGATION UNIT

Serious injuries from fall from height
at underground metal mine
6 November 2007

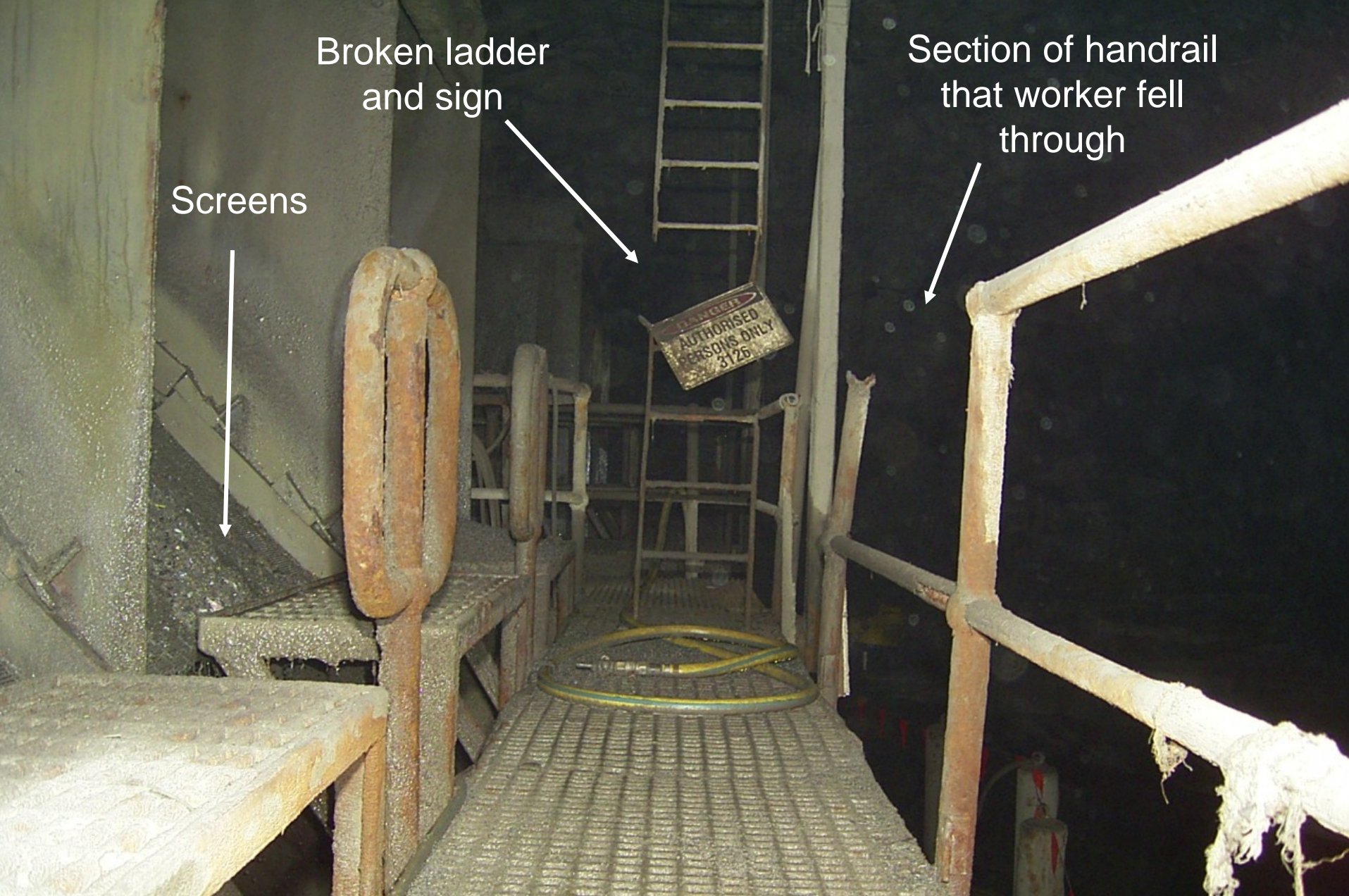
Falls through rusted handrails

- 6 November 2007
- At underground metalliferous mine western NSW
- Maintenance worker fell through handrail of walkway 2.5m to concrete floor



The incident

- Underground maintenance worker's job to clean screens of underground pre-screen mine dewatering plant
- Hosing screens and filters from raised walkway
- Slips and falls backward, grabs ladder stile to arrest his fall
- Ladder stile comes away in his hand



Broken ladder
and sign

Section of handrail
that worker fell
through

Screens

DANGER
AUTHORISED
PERSONS ONLY
3126

Pre-screens elevated walkway

The incident

- The worker falls onto the handrail which then failed under load
- Continued to fall 2.5 metres to concrete floor below
- Lays on floor injured and unable to seek help due to phone communications out of reach and not working
- Over three hours before co-worker finds him and raises alarm

The injuries and treatment

- Fractures to finger, right femur and right foot
- First aid and emergency response by trained mine rescue team
- Taken to surface to waiting ambulance
- Treated at local hospital then flown interstate for surgery and further treatment
- Two years of rehabilitation
- Not able to return to working underground

Causal factors

- Harsh underground environment promotes corrosion of structure
- Preventive maintenance and inspection systems failed to identify handrail corrosion
- Visual inspections only, no physical inspections
- Walkway handrails and ladders not maintained
- Handrails failed under load
- Working alone and poor communication

Best practice

- Structural failures are a known risk – keep in good condition to ensure worker safety
- Periodic inspection of structures, particularly safe access such as walkways, ladderways and handrails
- Inspections must include visual and physical checking for corrosion and structural integrity
- Safe working procedures for persons working alone, including adequate communications

Related published resources

- Department of Industry and Investment Safety Alert, SA08-06 *Worker falls through guardrail*
www.dpi.nsw.gov.au/minerals/safety/safety-alerts
- AS 1657-1992: *Fixed platforms, walkways, stairways and ladders – Design, construction and installation*
- AS 1470-1986: *Health and safety at work – Principles and practices*, Section 9 Machinery, plant and equipment.