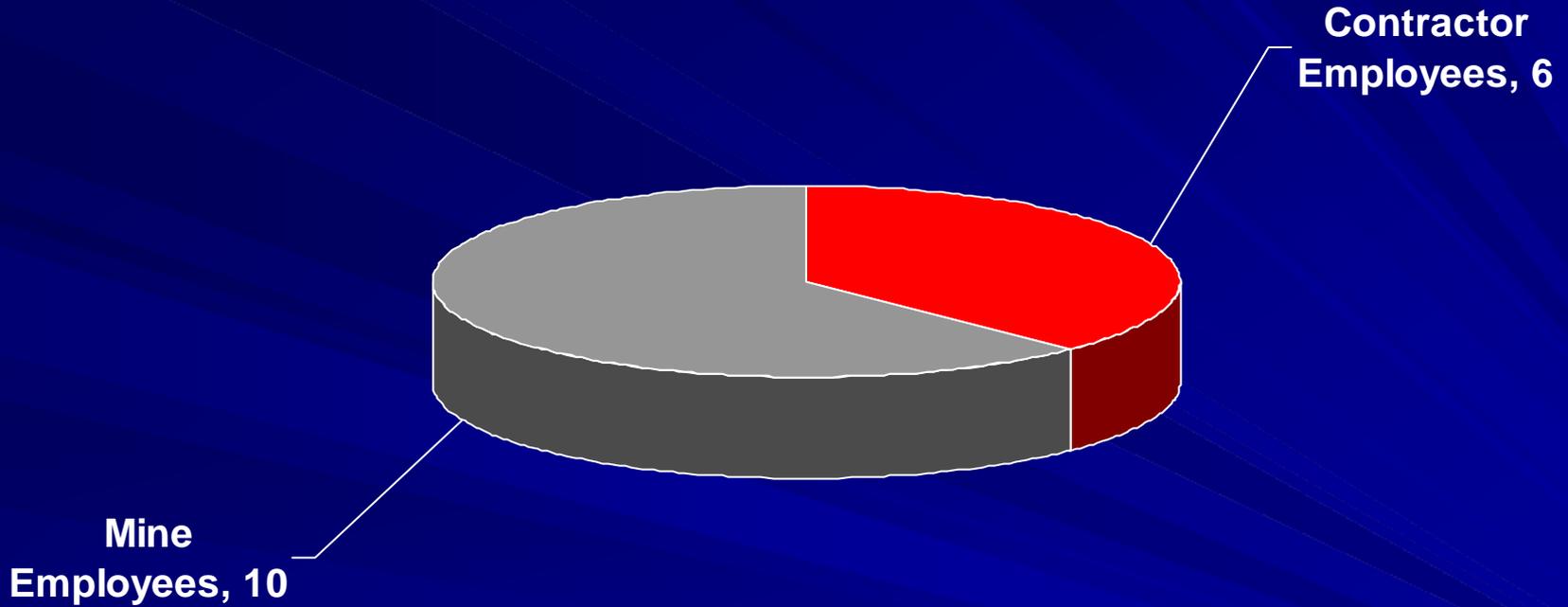
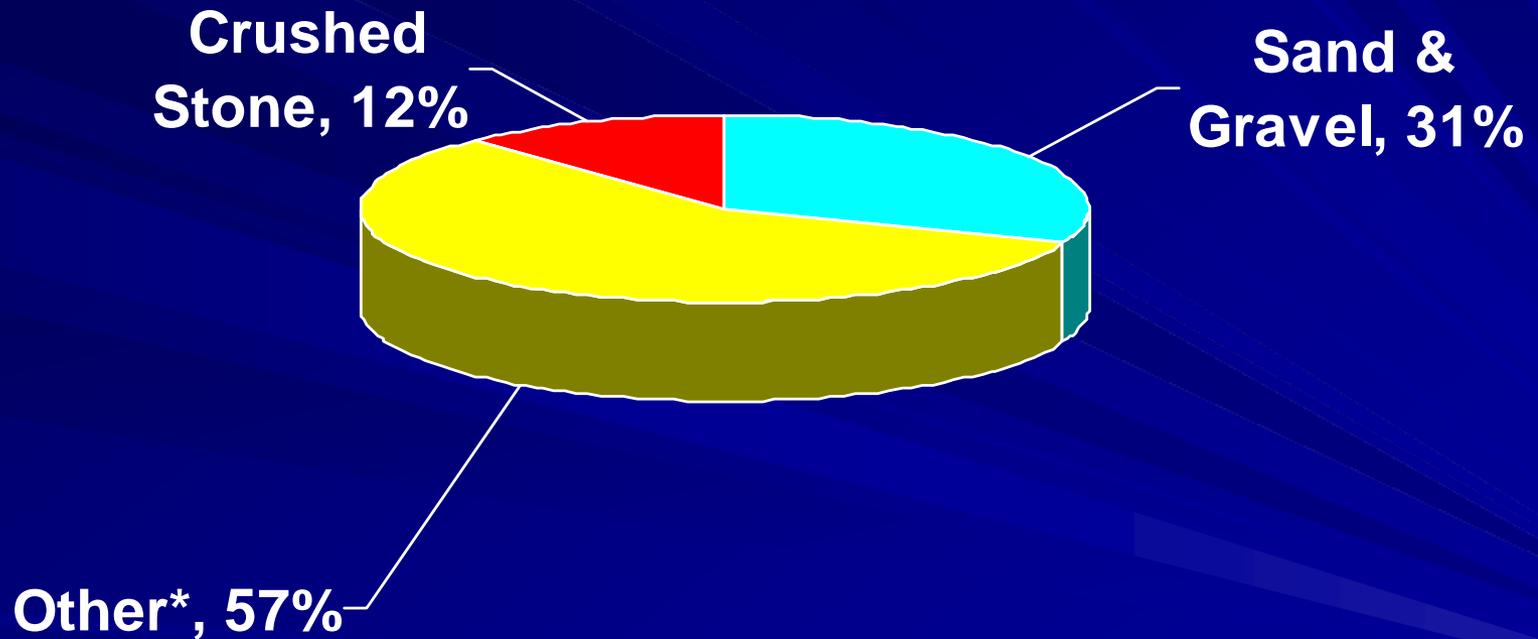


**Metal and Nonmetal
Fatal Accident Review
CY - 2009**

MNM Fatalities

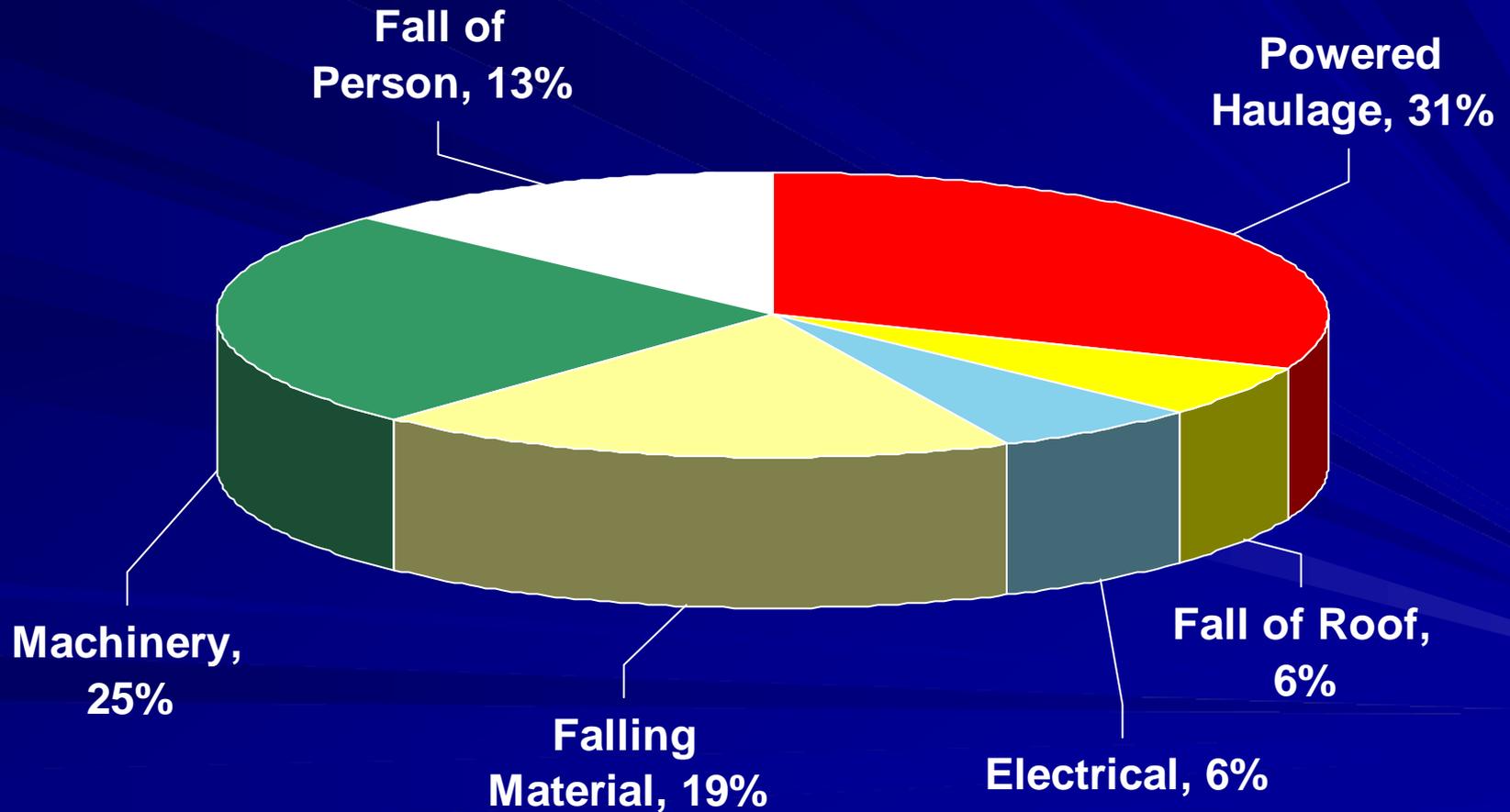


MNM Fatalities by Commodity

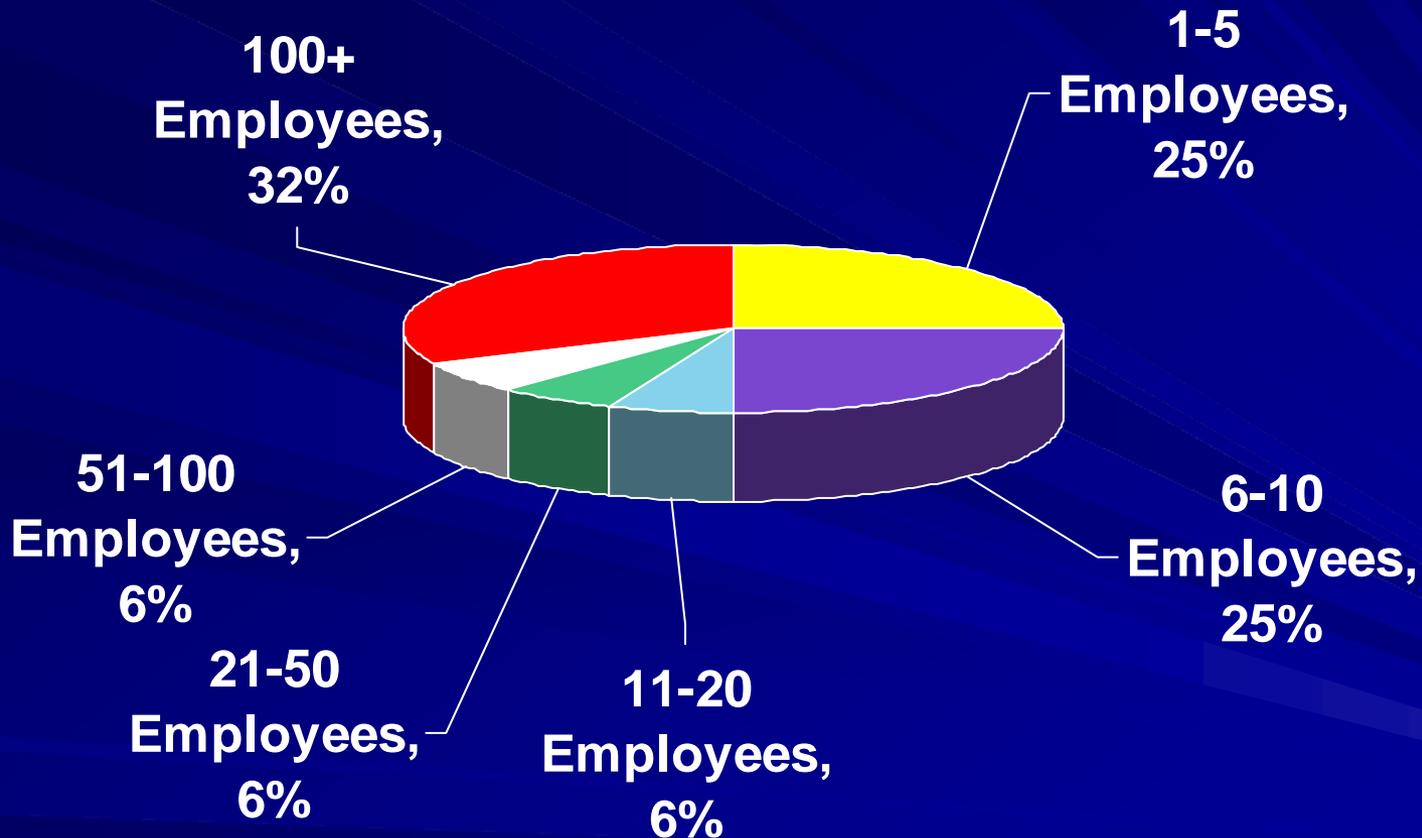


* Alumina, Cement, Clay, Gold, Lead/Zinc, Salt, Dimension Stone, Lime, Copper

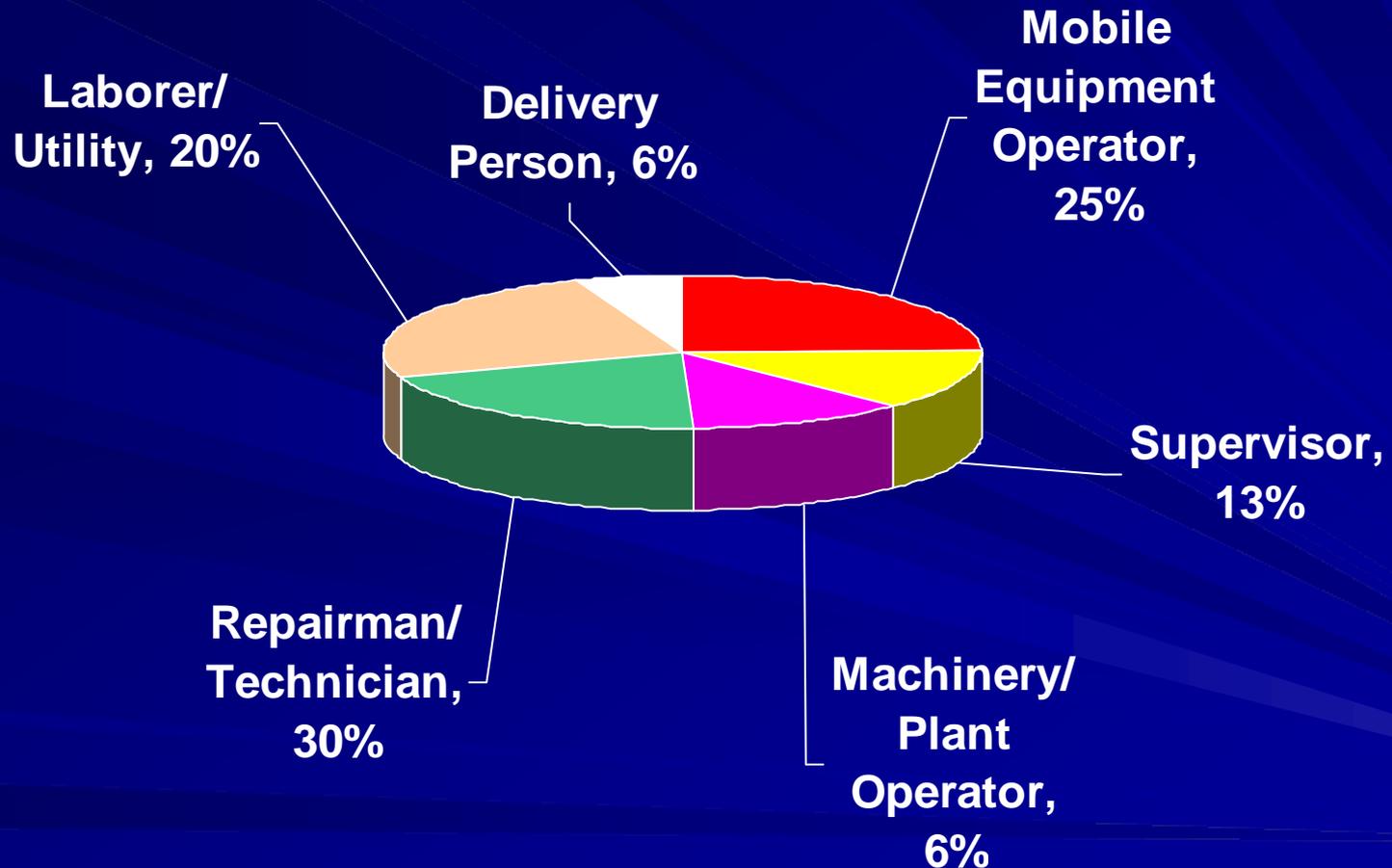
MNM Fatalities by Classification



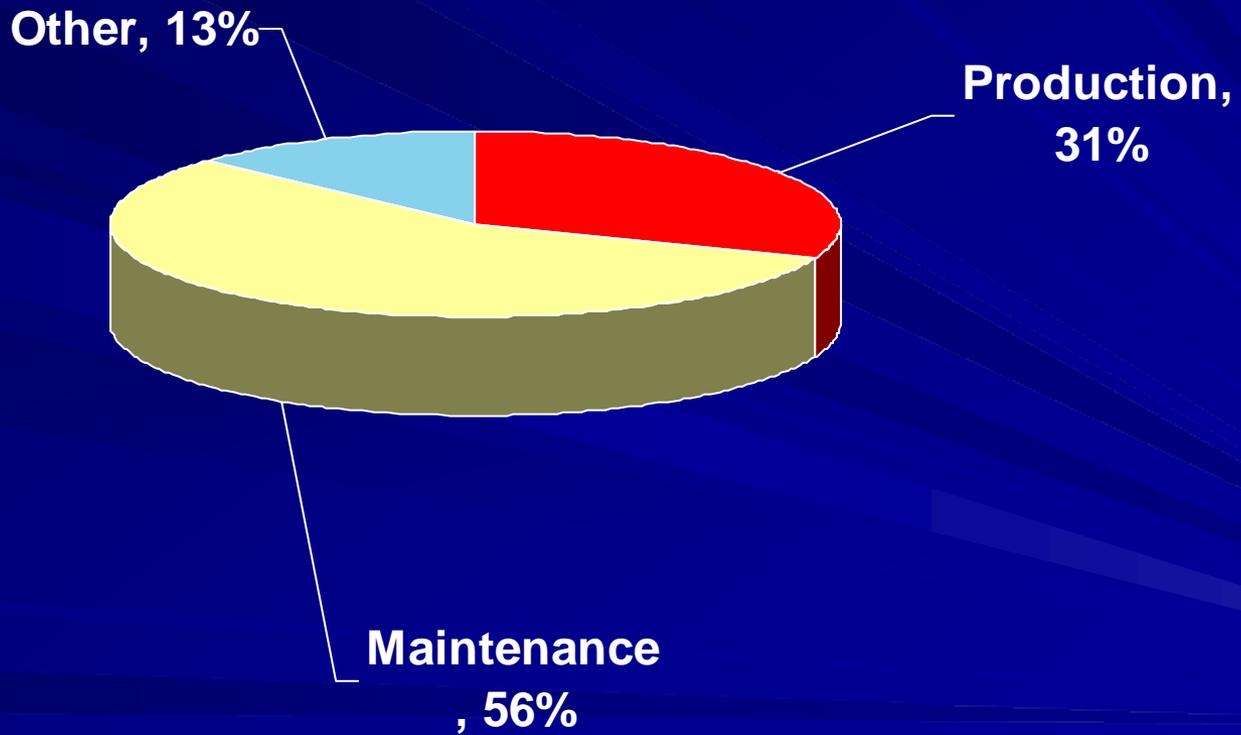
MNM Fatalities by Mine Size



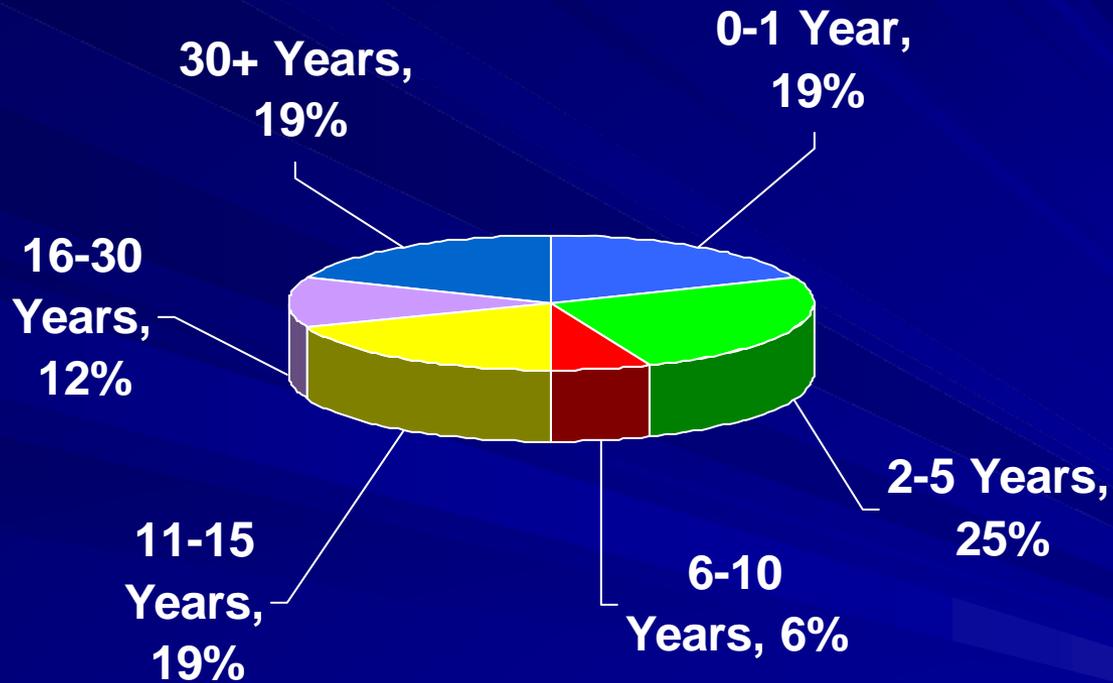
MNM Fatalities by Occupation



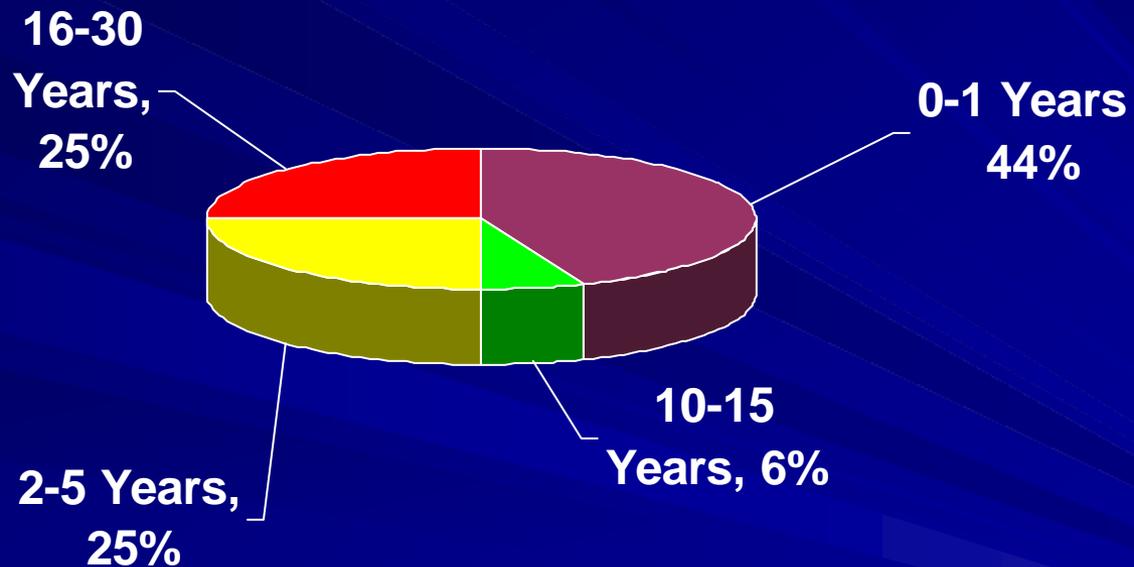
MNM Fatalities by Activity



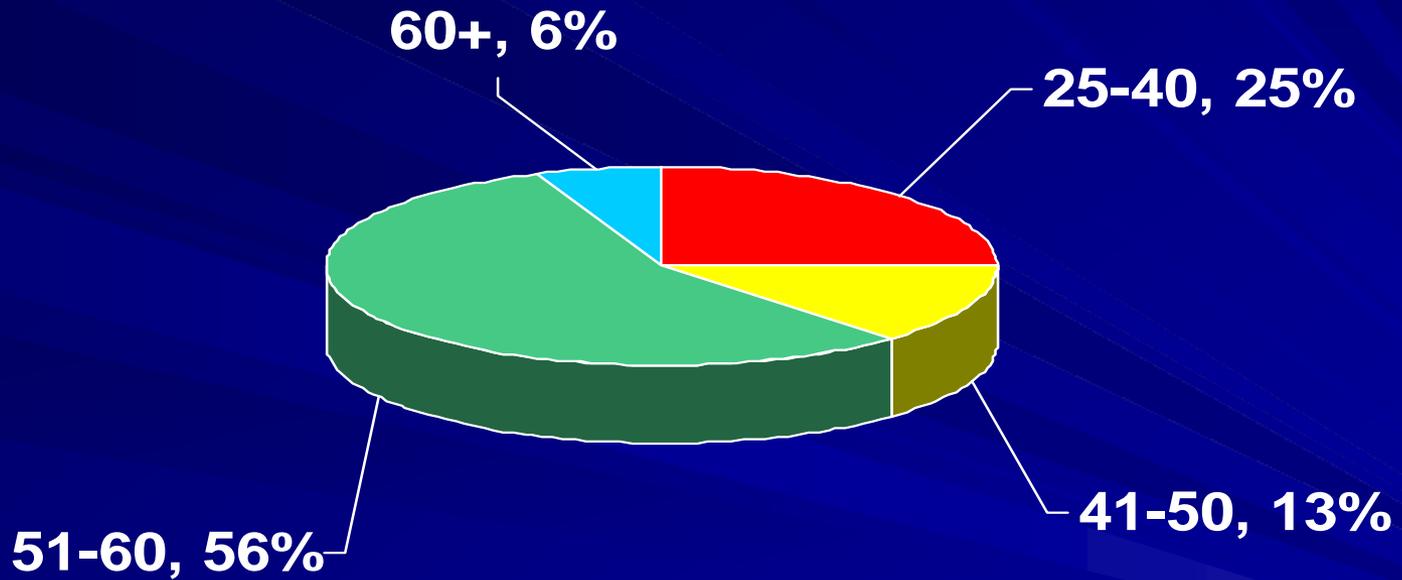
MNM Fatalities by Total Experience



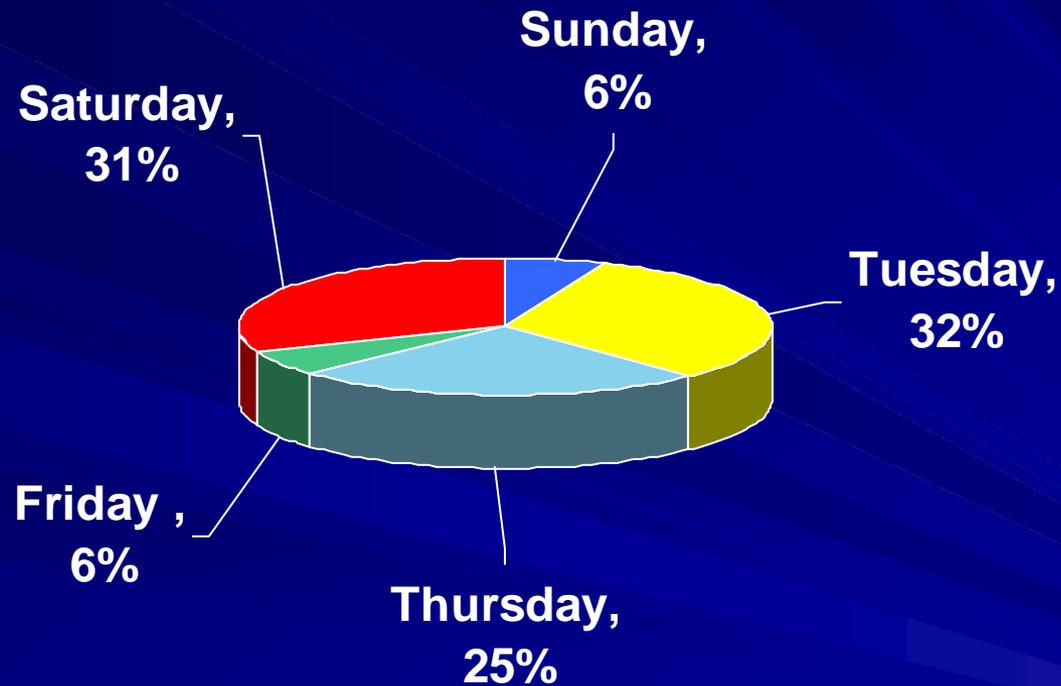
MNM Fatalities by Job Experience



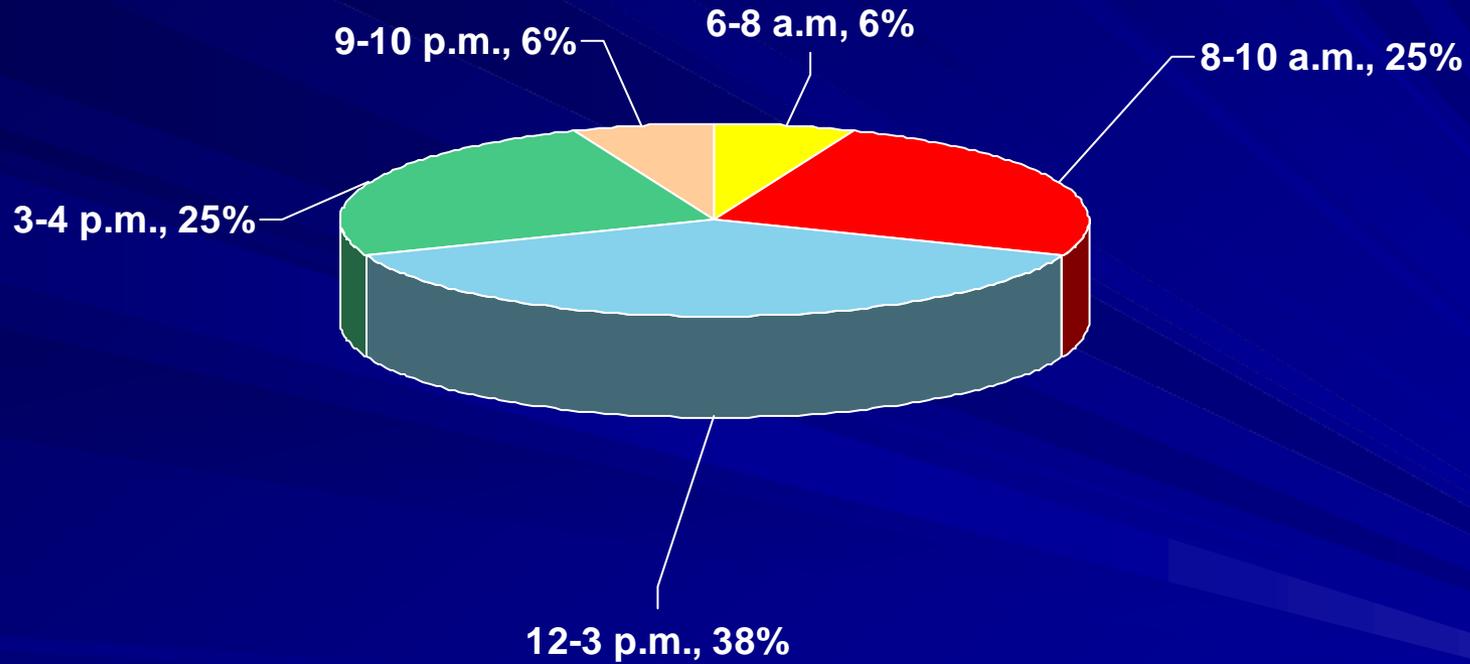
MNM Fatalities by Age



MNM Fatalities by Day of Week



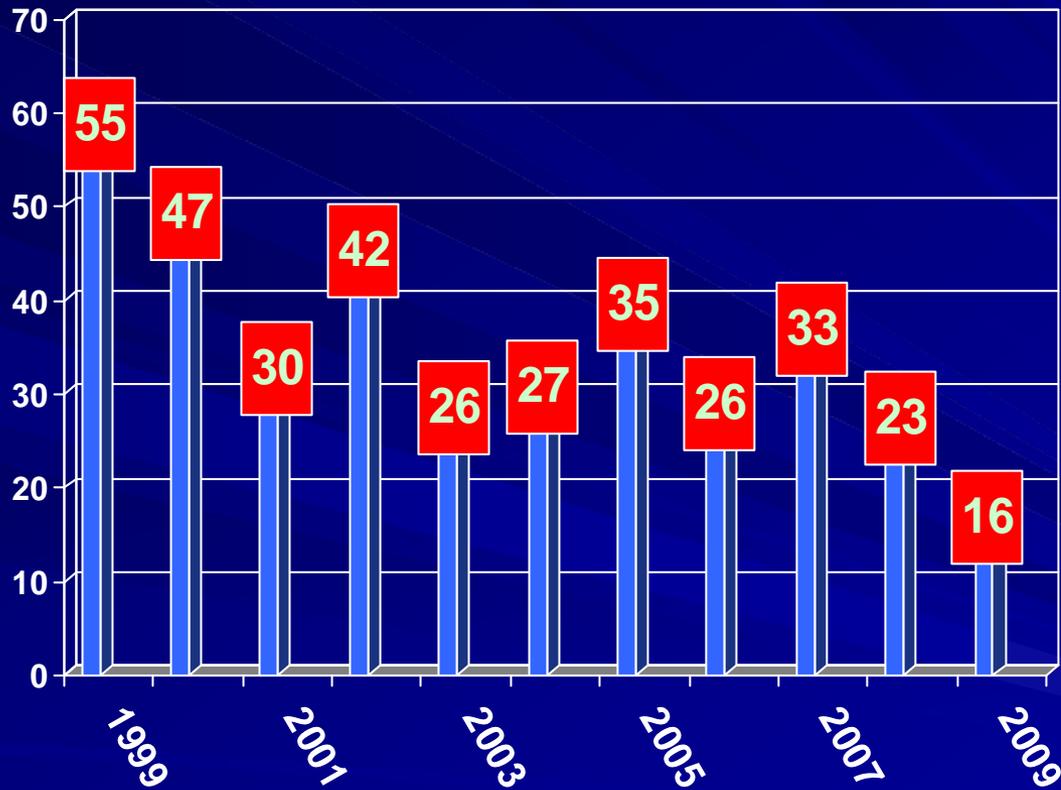
MNM Fatalities by Hour of Day



Root Causes

- **No Risk Assessment Conducted**
- **Inadequate Policies, Procedures, Controls**
- **Did not use Personal Protective Equipment**
- **Lack of Pre-operation Checks**
- **Equipment not Maintained**
- **Failure to Conduct Examinations**
- **Training Inadequate**

MNM Fatalities – 1999-2009



Electrical

Year	'05	'06	'07	'08	'09
Fatalities	2	5	1	2	1

- MCC fires / explosions
- Deenergize
- Lockout/Tagout
- Power line clearance
- Monitor Contractors



Fall of Material

Year	'05	'06	'07	'08	'09
Fatalities	3	6	2	3	3

- Block equipment against motion
- Cover or secure openings
- Barricade area below work
- Avoid suspended loads



Fall of Roof or Back

Year	'05	'06	'07	'08	'09
Fatalities	0	0	3	3	1

- Examine and test for loose ground
- Design, install, and maintain a support system to control the ground in places where persons work or travel in performing their assigned tasks

Slip / Fall of Person

Year	'05	'06	'07	'08	'09
Fatalities	3	3	6	4	2

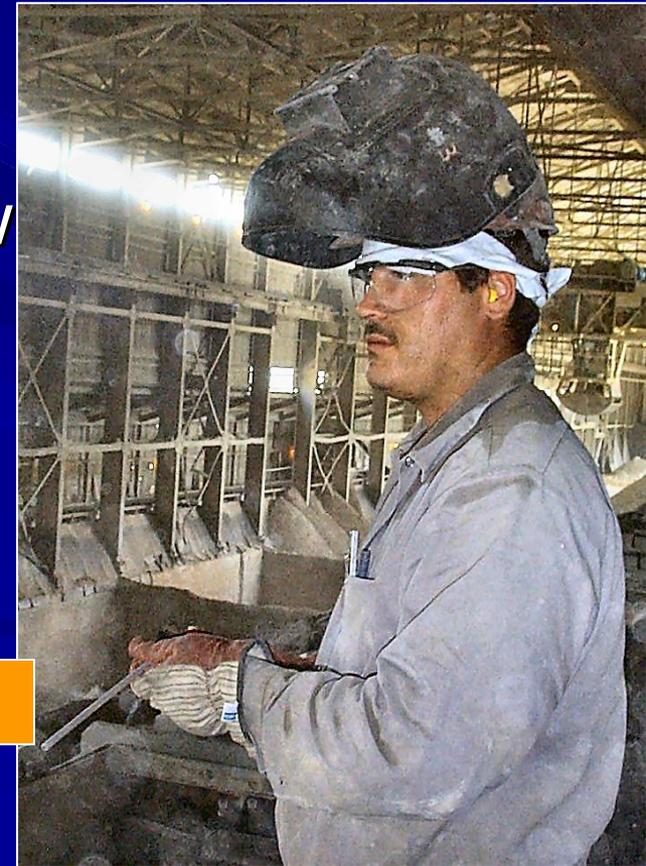
- Many serious fall injuries
- Eliminate Hazards and use PPE
 - Inadequate walkways and scaffolds
 - Fall protection not used
 - Persons not anchored
 - Holes not covered or protected



Human Element

Safe Work Practices not Established or Followed—

- Hazards not eliminated
- Fall protection not attached
- Seat belt not worn
- No barricades while working below
- Working near an open hole
- Circumvented a guard



SLAM Risks



U.S. Department of Labor

**Make the
RIGHT Decision**

Mine Safety and Health Administration