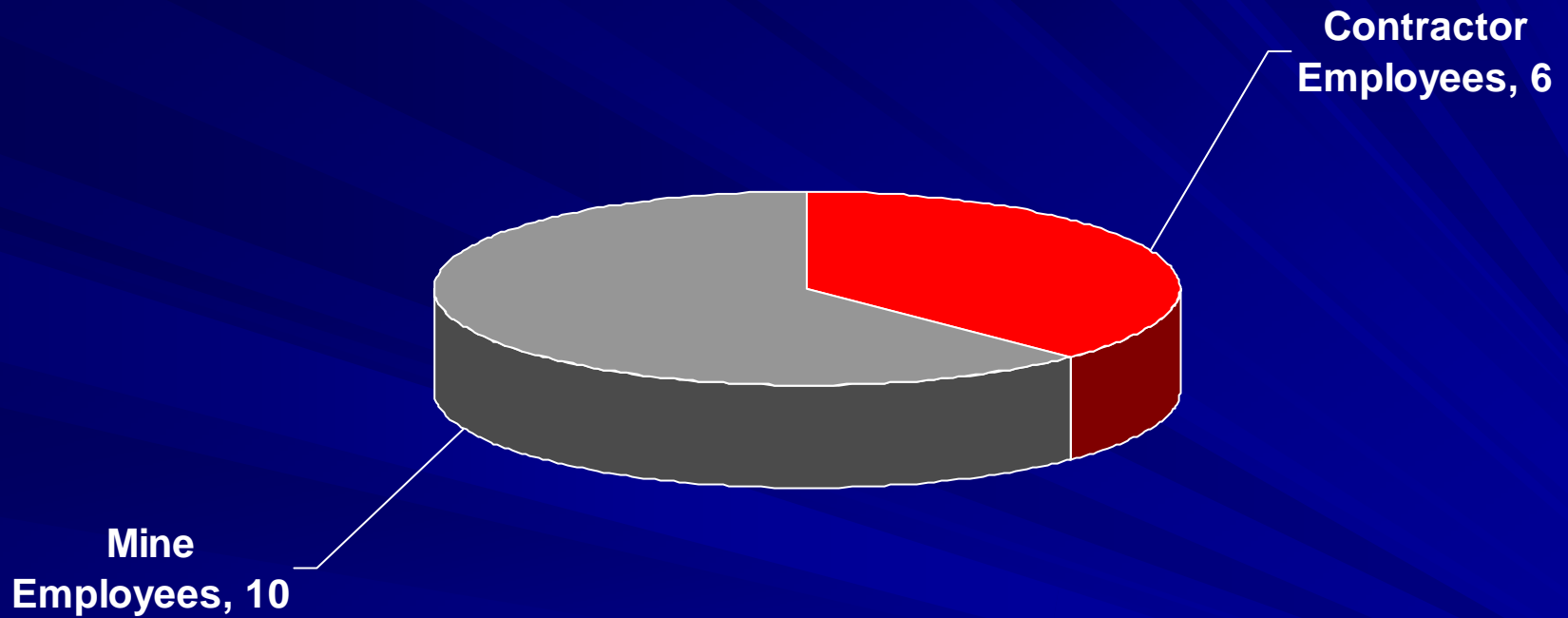
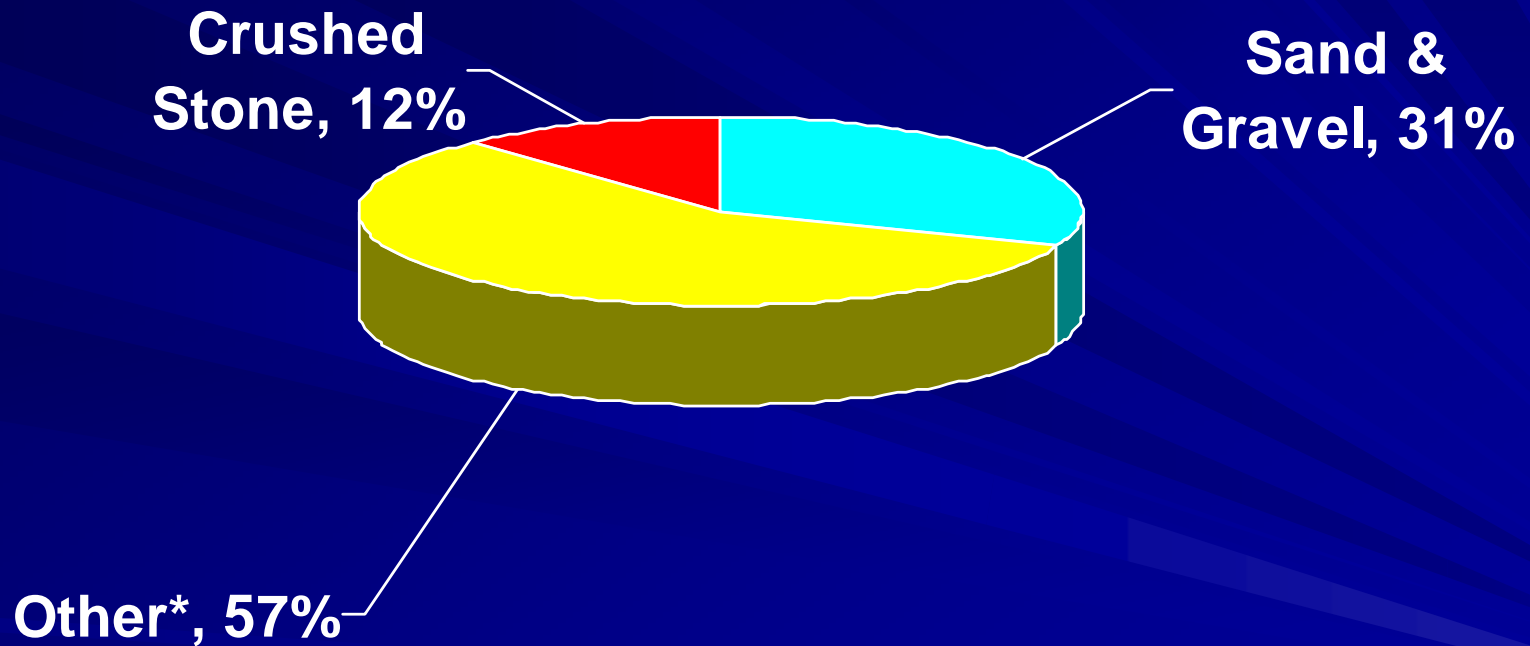


# **Metal and Nonmetal Fatal Accident Review CY - 2009**

# MNM Fatalities

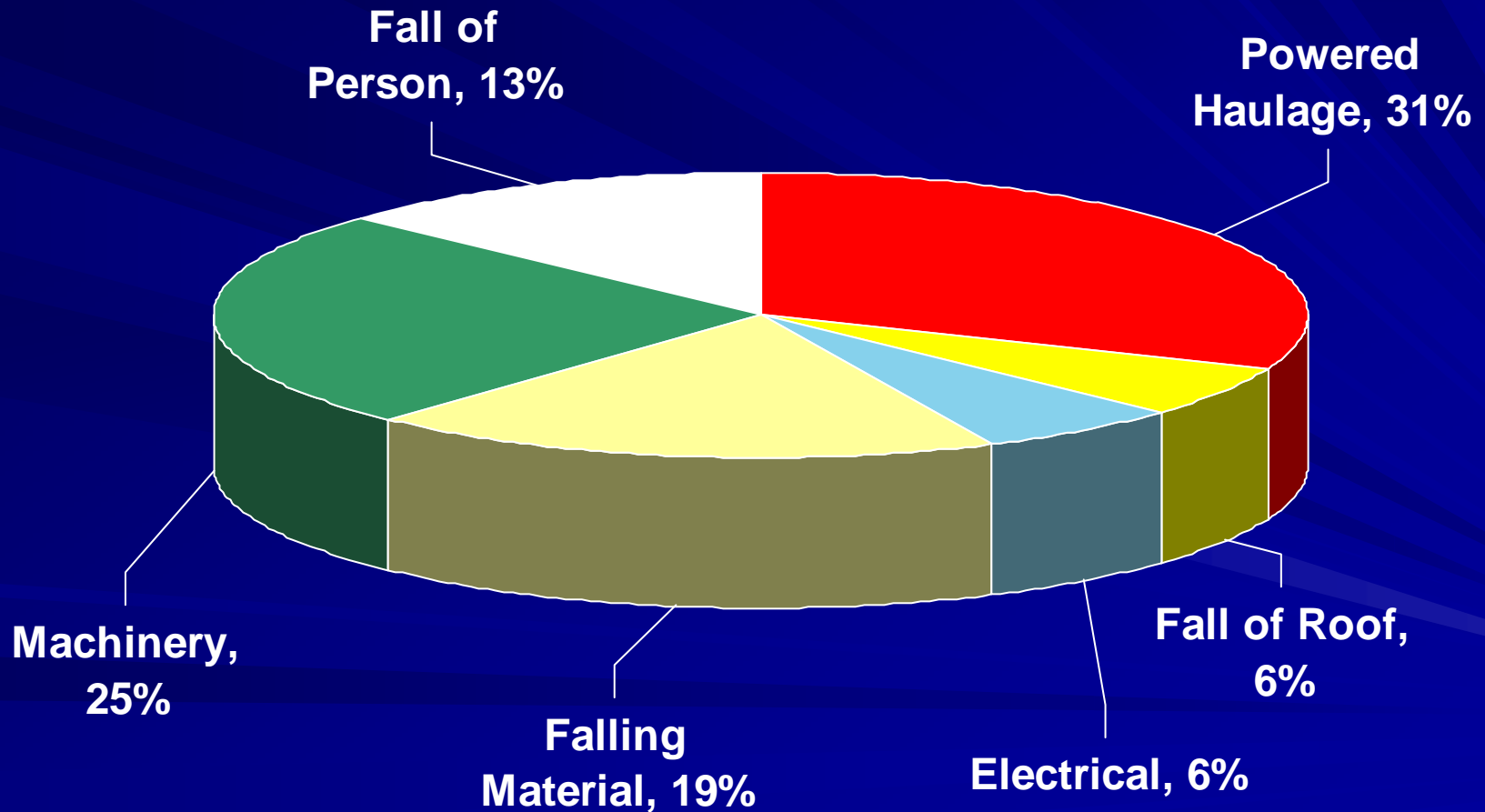


# MNM Fatalities by Commodity

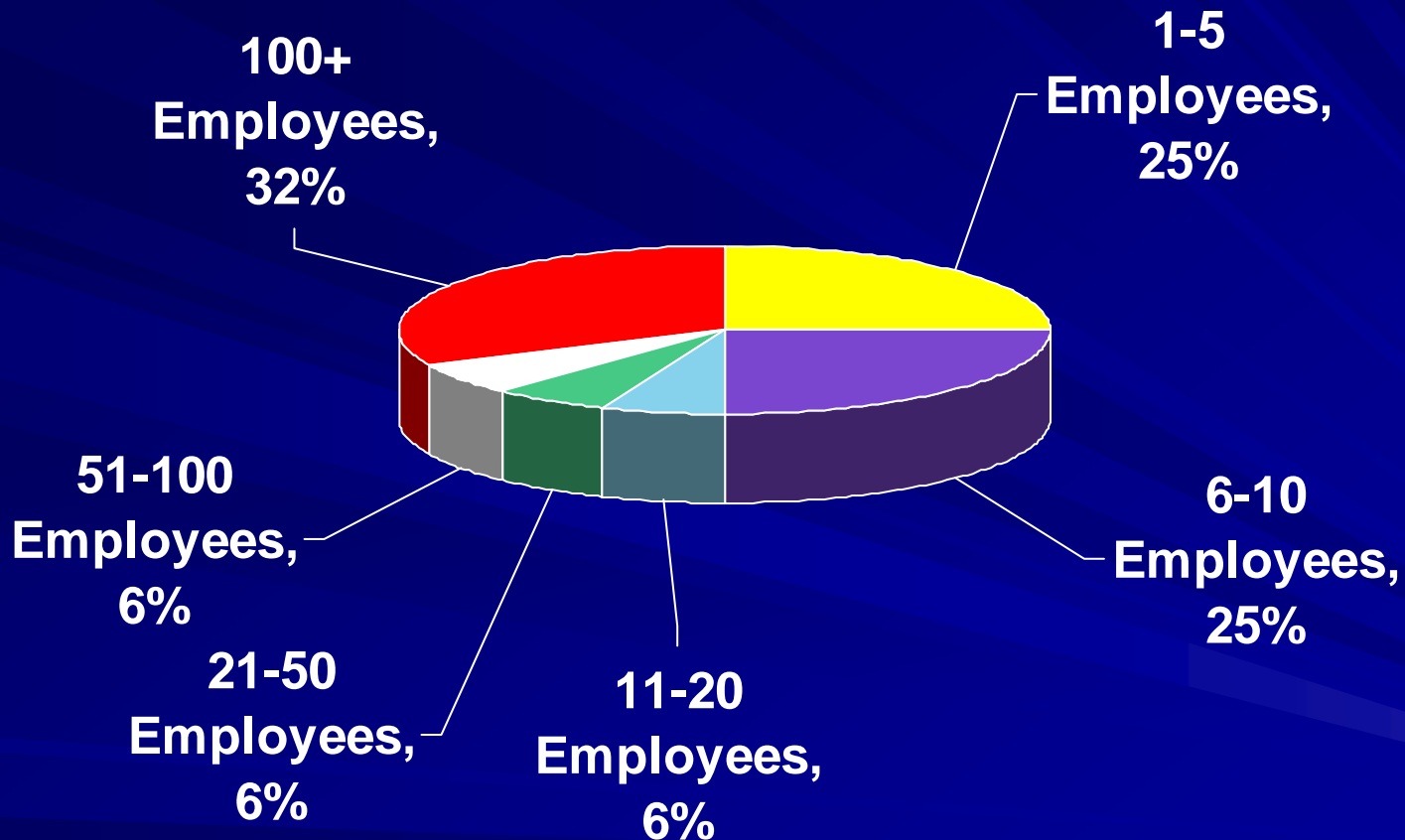


\* Alumina, Cement, Clay, Gold,  
Lead/Zinc, Salt, Dimension Stone,  
Lime, Copper

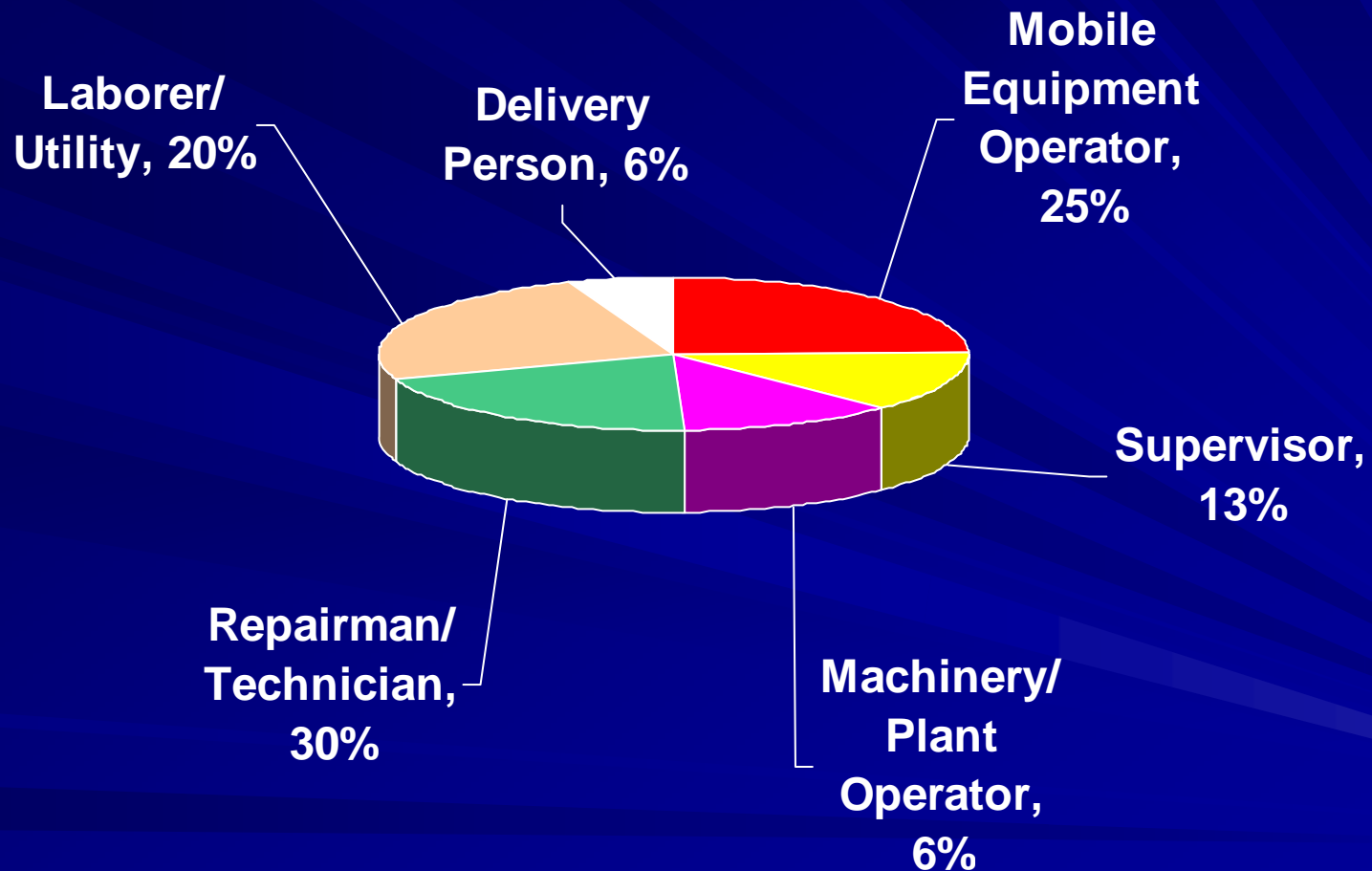
# MNM Fatalities by Classification



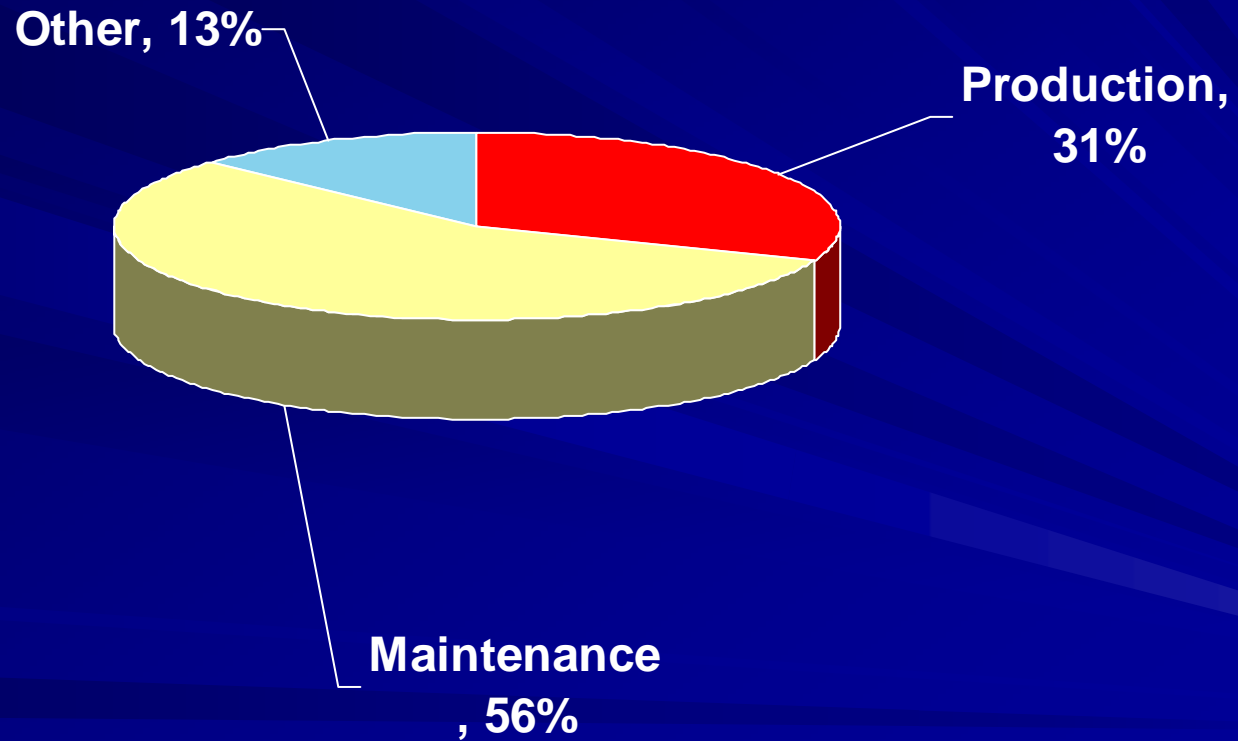
# MNM Fatalities by Mine Size



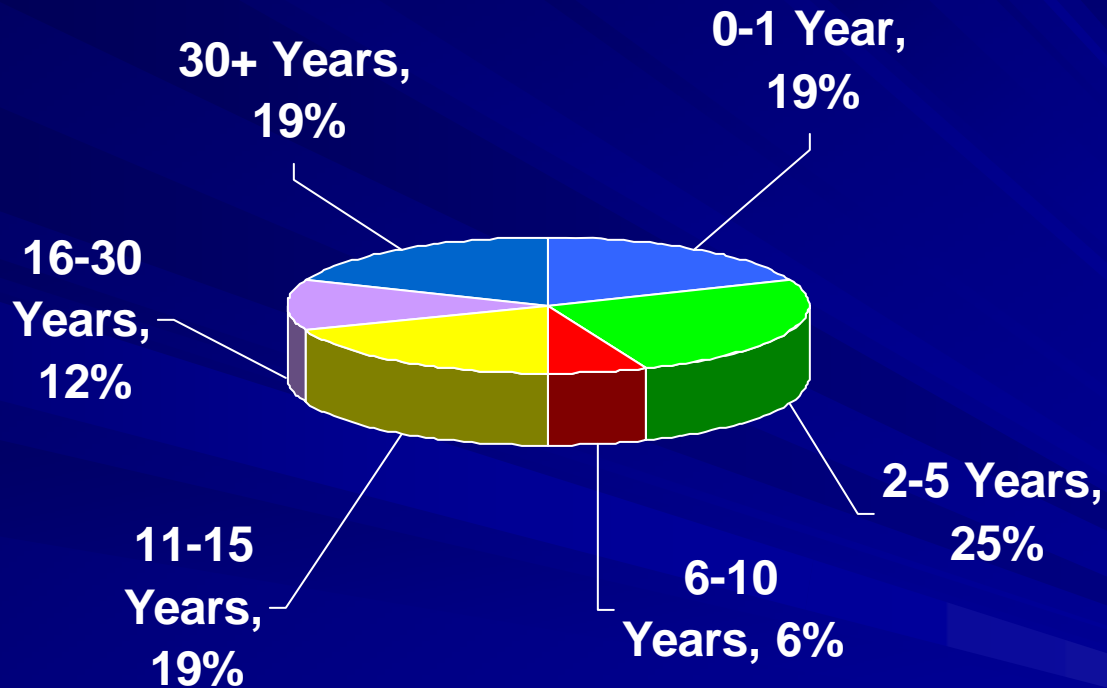
# MNM Fatalities by Occupation



# MNM Fatalities by Activity

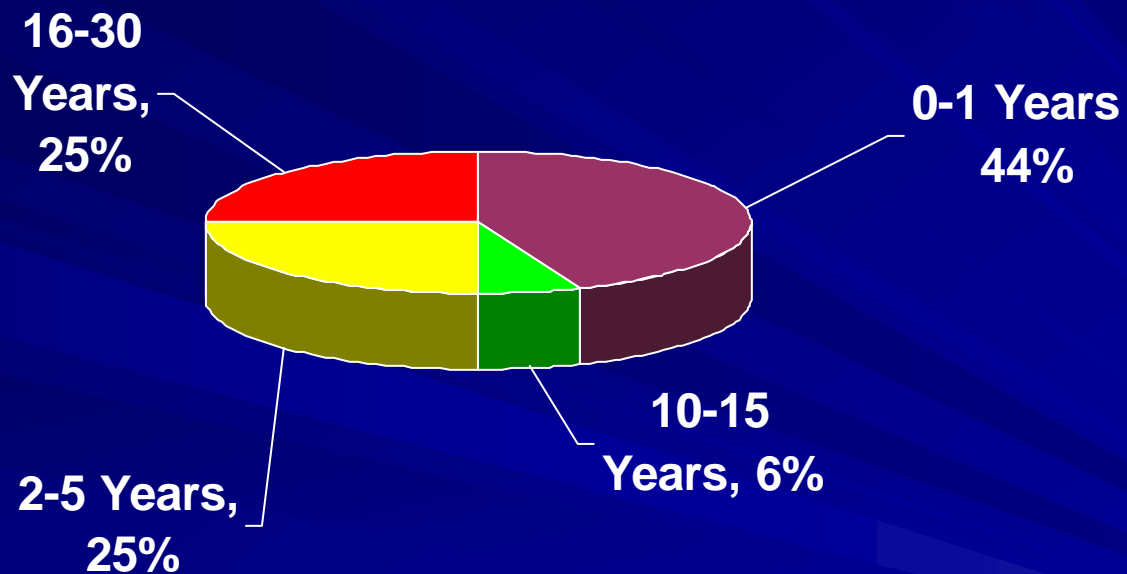


# MNM Fatalities by Total Experience

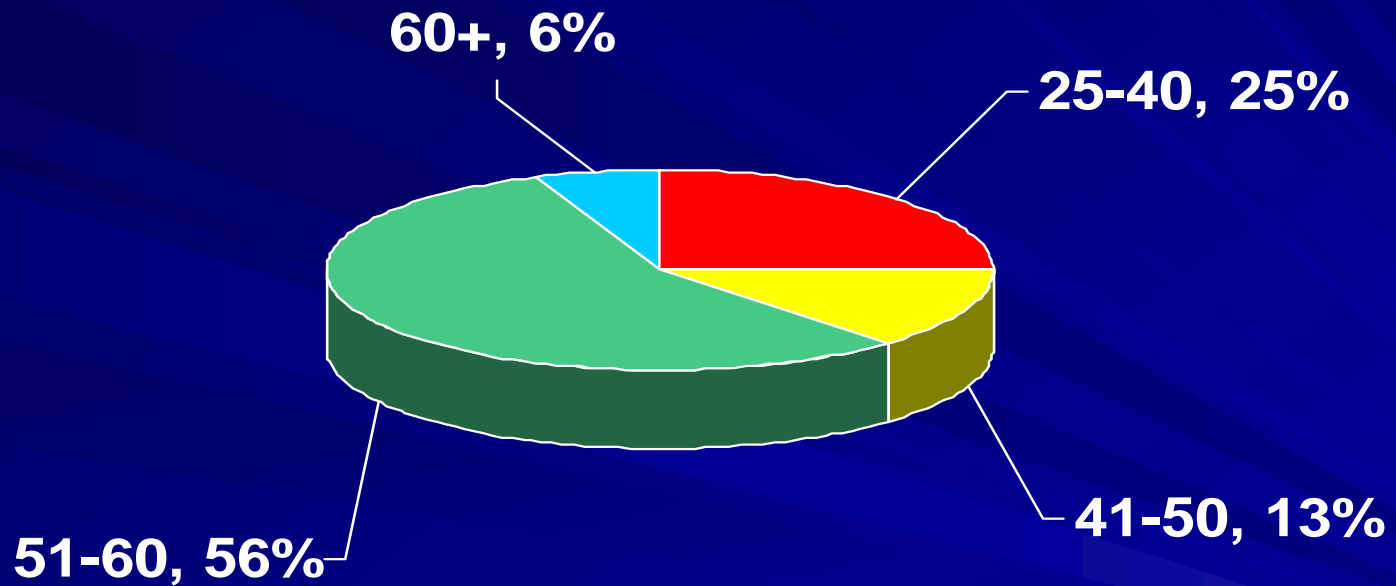




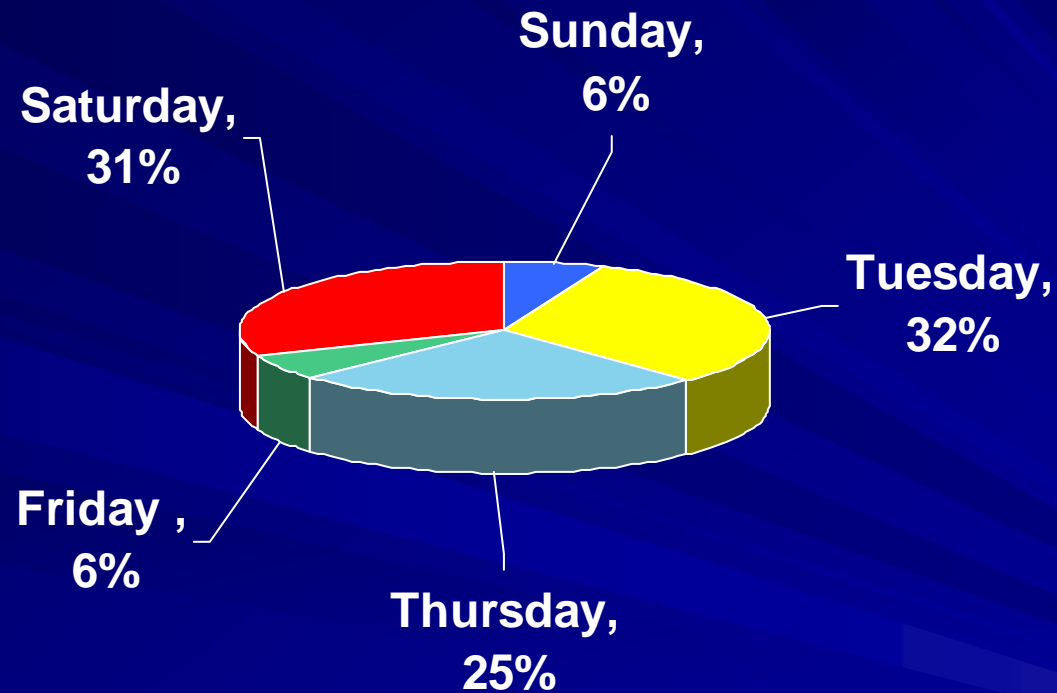
# MNM Fatalities by Job Experience



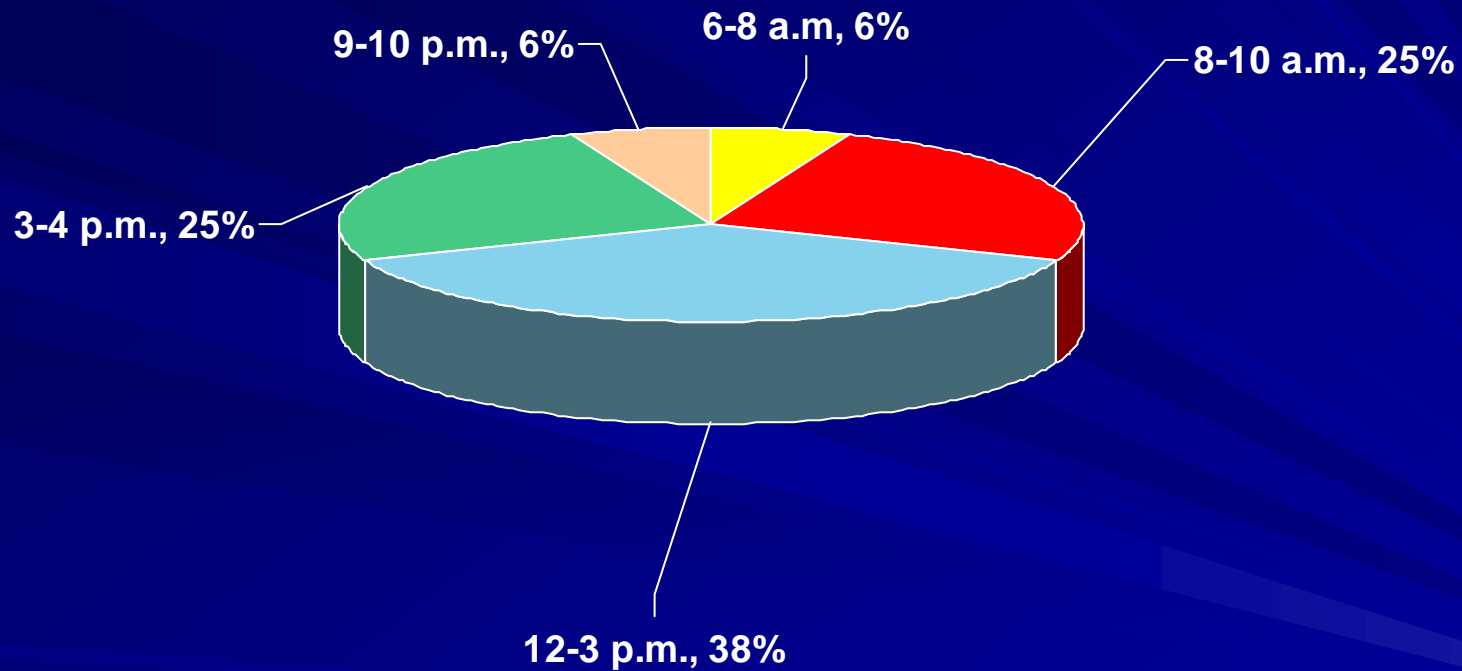
# MNM Fatalities by Age



# MNM Fatalities by Day of Week



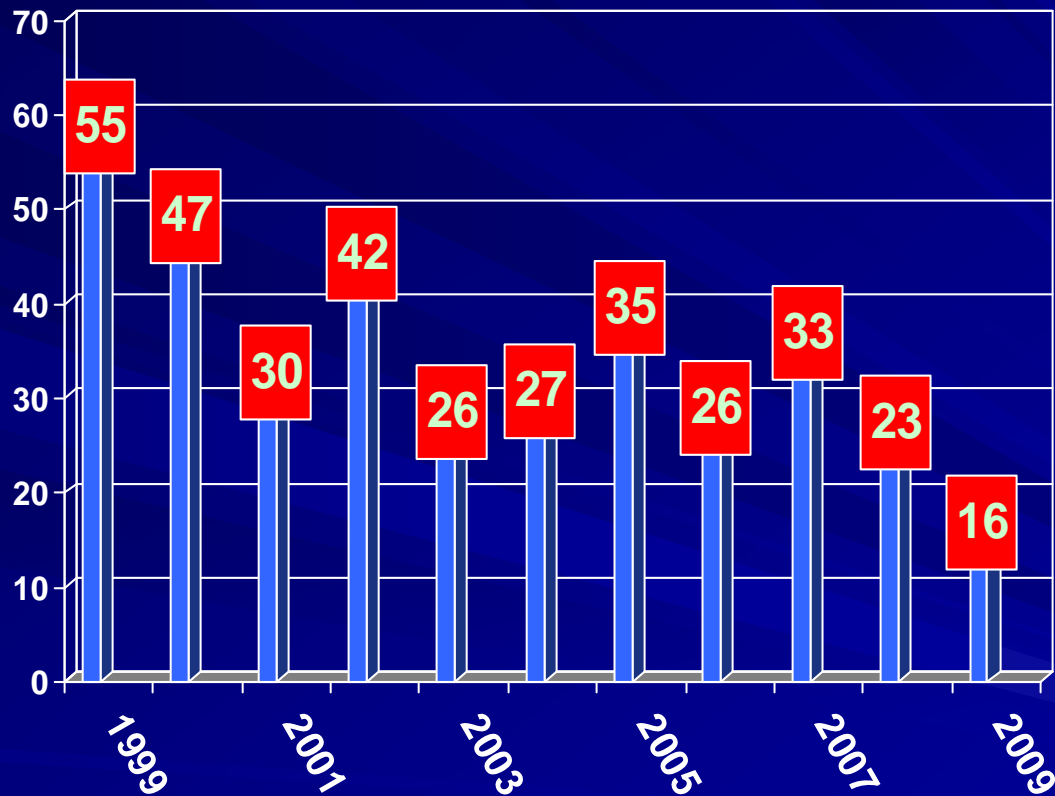
# MNM Fatalities by Hour of Day



# 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   |

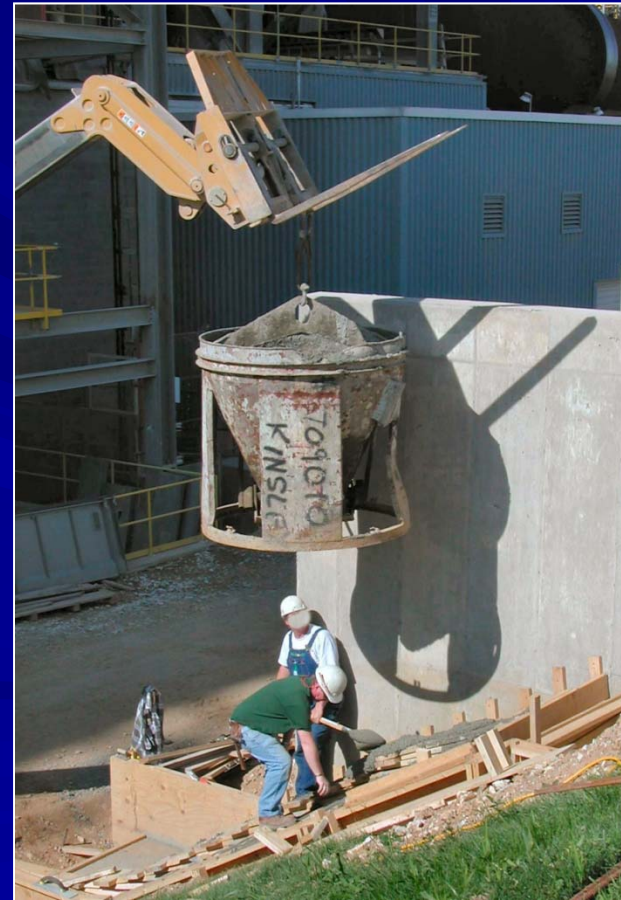
- MCC fires / explosions
- Deenergize
- Lockout/Tagout
- Power line clearance
- Monitor Contractors



# 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

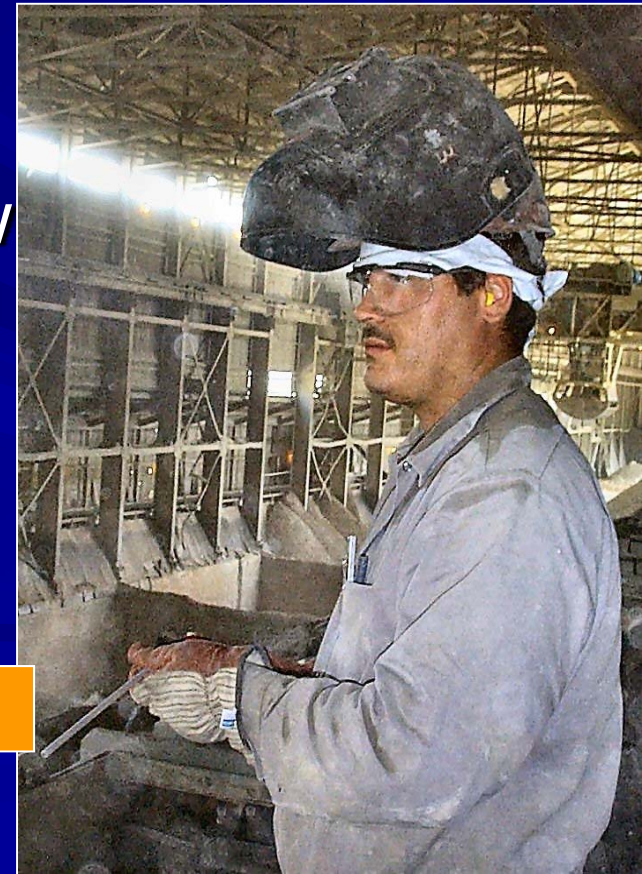


# Human Element

## 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