

# UNDERGROUND AND SURFACE MINING FACTS – 2006

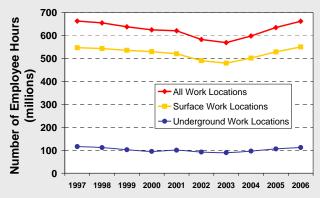
### **Mining Operations**

In 2006, data obtained from the Mine Safety and Health Administration (MSHA) indicated a total of 935 underground (6.3%) and 13,950 surface (93.7%) mining operations.<sup>1</sup>

#### **Employees**

A total of 53,620 employees,<sup>2</sup> or 56,046 full-time equivalent  $(FTE)^3$  employees, were reported to MSHA as working at underground mining locations in 2006. This is in contrast to 309,877 employees (or 275,212 FTE employees) that were reported as working at surface locations.<sup>4</sup>

• Surface work location employee hours accounted for 83.1% of all hours reported to MSHA, while 16.9% of employee hours were reported for underground work locations.



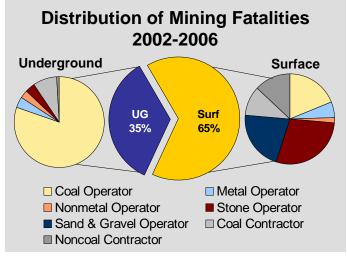
Note: Beginning with the 2006 Mining Fact Sheets, hours reported to MSHA for office employees are included in number of employee hours.

- The majority of surface employee hours were for mine operator employees (81.8%) as opposed to independent contractor employees (18.2%).
- Coal operators were the mining sector<sup>5</sup> reporting the most underground worker employee hours to MSHA (n=85,195,306; 76.0%).

#### Fatalities

Of the 73 occupational mining fatalities reported to MSHA in 2006, 37 occurred at underground work locations, while 36 occurred at surface locations.

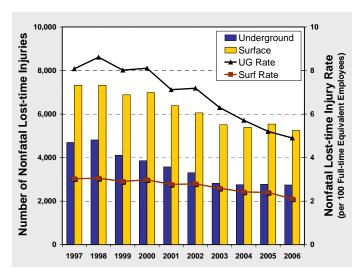
• The fatality rate of 66.0 per 100,000 FTE employees was higher at underground work locations, compared to the rate of 14.6 for surface work locations.



### Nonfatal Lost-time Injuries

Within underground work locations, 2,739 nonfatal lost-time injuries were reported, resulting in 172,539 lost workdays.<sup>6</sup> This compares to 5,249 nonfatal lost-time injuries attributed to surface workers (total days lost=267,203).

• The overall underground nonfatal lost-time injury rate was greater than the surface injury rate (4.9 vs. 2.1 per 100 FTE workers).



- The most frequent classifications of nonfatal lost-time injuries involved handling materials for both underground (n=810; 29.6%) and surface (n=1,845; 35.1%) work locations.
- The back was the most frequently reported body part injured at both underground (n=503; 18.4%) and surface (n=981; 18.7%) work locations.



DEPARTMENT OF HEALTH AND HUMAN SERVICES Centers for Disease Control and Prevention National Institute for Occupational Safety and Health September 2008



## Mine and Employment Characteristics, 2006

Commodity and	Number of M	/lining Op	erations <sup>1</sup>	Number	r of Employ	vees <sup>2</sup>	Number of FTE Employees <sup>3</sup>			
Type of Employer	Underground	d Surface Total		Underground	Surface	Total	Underground	Surface	Total	
Coal Operator	675	1,438	2,113	38,253	47,440	85,693	42,598	51,897	94,495	
Metal Operator	92	188	280	4,539	28,335	32,874	4,575	29,397	33,972	
Nonmetal Operator	46	695	741	2,374	20,677	23,051	2,415	20,806	23,221	
Stone Operator	122	4,451	4,573	1,877	80,706	82,583	2,154	83,247	85,402	
Sand and Gravel Operator	NA	7,178	7,178	NA	46,069	46,069	NA	39,796	39,796	
Operator Total	935	13,950	14,885	47,043	223,227	270,270	51,742	225,144	276,886	
	Number of Companies									
Coal Contractor	NA	NA	2,724	4,762	32,520	37,282	2,903	20,175	23,078	
Noncoal Contractor	NA	NA	4,686	1,815	54,130	55,945	1,401	29,893	31,294	
Contractor Total	NA	NA	7,410	6,577	86,650	93,227	4,304	50,068	54,372	
TOTAL				53,620	309,877	363,497	56,046	275,212	331,258	

## Mining Occupational Fatalities and Injuries, 2006

	Occupational Fatalities (per 100,000 FTE employees)						Nonfatal Lost-time Injuries (per 100 FTE employees)					
Commodity and Type of Employer	Underground		Surface		Total		Underground		Surface		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Coal Operator	36	84.5	6	12.4	42	46.2	2,218	5.2	803	1.7	3,021	3.3
Metal Operator	0	0.0	3	11.9	3	10.1	141	3.1	524	2.1	665	2.2
Nonmetal Operator	0	0.0	0	0.0	0	0.0	73	3.0	344	2.0	417	2.1
Stone Operator	0	0.0	10	13.8	10	13.4	43	2.0	2,038	2.8	2,081	2.8
Sand and Gravel Operator	NA	NA	6	17.2	6	17.2	NA	NA	795	2.3	795	2.3
Operator Total	36	69.6	25	12.6	61	24.4	2,475	4.8	4,504	2.3	6,979	2.8
Coal Contractor	1	34.4	4	20.9	5	22.7	215	7.4	342	1.8	557	2.5
Noncoal Contractor	0	0.0	7	24.8	7	23.6	49	3.5	403	1.4	452	1.5
Contractor Total	1	23.2	11	23.2	12	23.2	264	6.1	745	1.6	1,009	2.0
TOTAL	37	66.0	36	14.6	73	24.2	2,739	4.9	5,249	2.1	7,988	2.6

**NA** Not applicable.

Data source: Publicly released data files of employment and accident/injury/illness collected by MSHA under 30 CFR 50.

**Notes:** All analyses of accident data exclude office employees. Occupational fatalities exclude all cases under 17 years of age. Further statistical methodology is available on the NIOSH Internet [http://www.cdc.gov/niosh/mining/statistics/method.htm].

<sup>1</sup>Mines at which only independent contractors were working did not show any employment and were not counted.

<sup>2</sup>Number of employees is the average number of employees working at individual mines during calendar quarters of active operations. <sup>3</sup>Full-time equivalent employees computed using reported employee hours (2,000 hours = 1 FTE).

<sup>4</sup>Surface work locations include surface operations at underground mines, surface operations (strip or open pit), auger, culm banks, dredge, other surface operations, independent shops and yards, and mills or preparation plants.

<sup>5</sup>Mining sectors: coal operators, metal operators, nonmetal operators, stone operators, sand and gravel operators, coal contractors, and noncoal contractors.

<sup>6</sup>Includes actual days away from work and/or days of restricted work activity. For permanently disabling injuries only, statutory days charged by MSHA were used if they exceeded the total lost workdays.

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