



MSHA/IMA- NA Alliance – Injury and Illness Data Analysis Team¹ Meeting Statement of Work

August 9 – 10, 2004

Overview:

A team of MSHA and IMA-NA members met to ‘data-mine’ injuries that occurred in the industrial minerals industry in calendar years 2001 through 2003. The team reviewed and analyzed injury and illness data for the talc, mica, feldspar, industrial sand, trona, bentonite, borate, and clay mining industries. The data was analyzed for various activities by degree and number of injuries.

Objective:

Examine MSHA’s injury and illness database for the industrial minerals industry to identify trends and determine strategies to have every miner return home safe and healthy at the end of every shift.

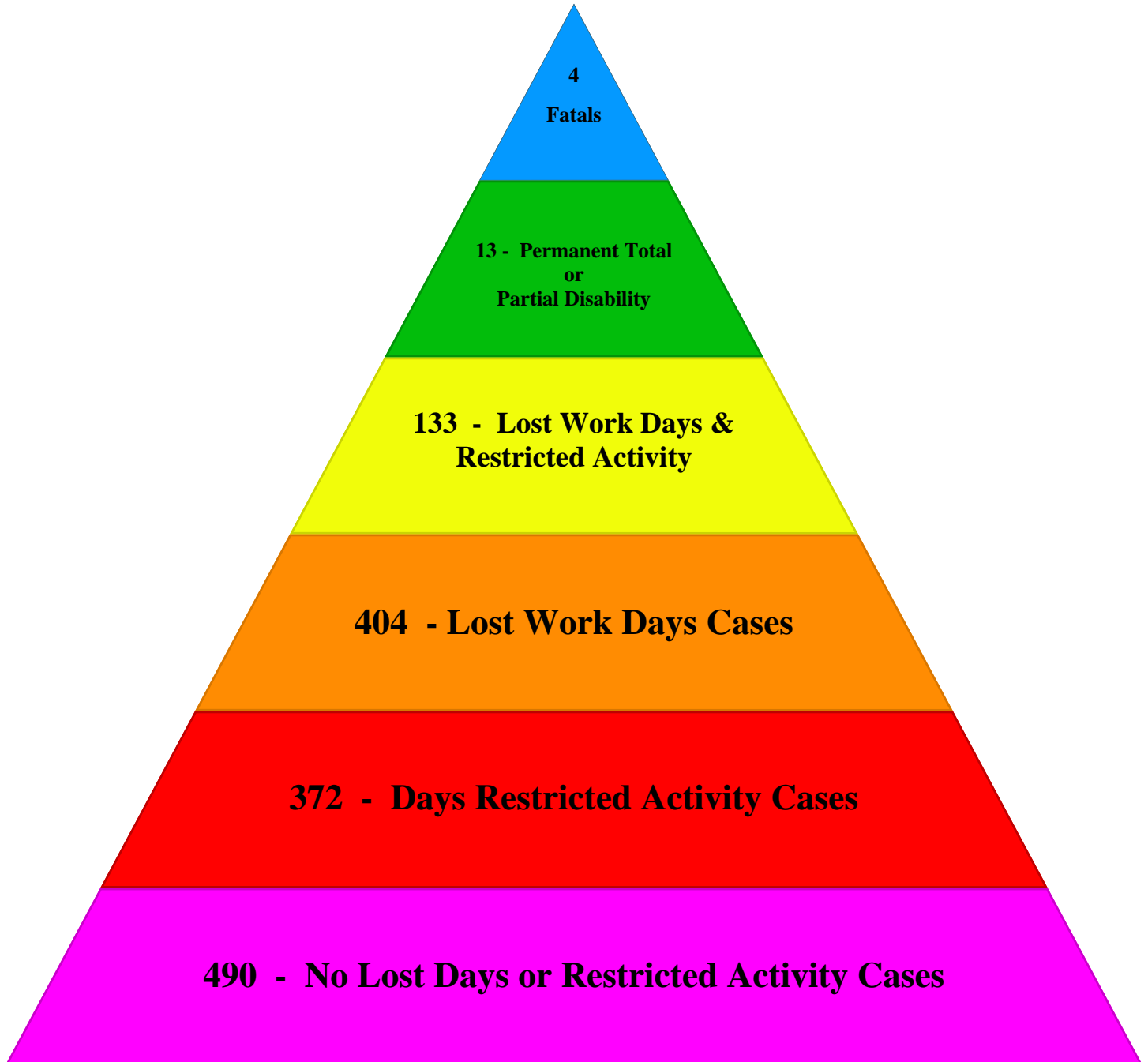
Scope (CY 2001-2003):

1. Identify type of activities that result in the most injuries or illnesses.
2. Identify type of activities that most frequently result in injuries or illnesses with a consideration for the severity of the injuries.
3. A total of 1,416 injuries, that included 4 fatalities and 13 permanent total or partial disabilities, were analyzed.

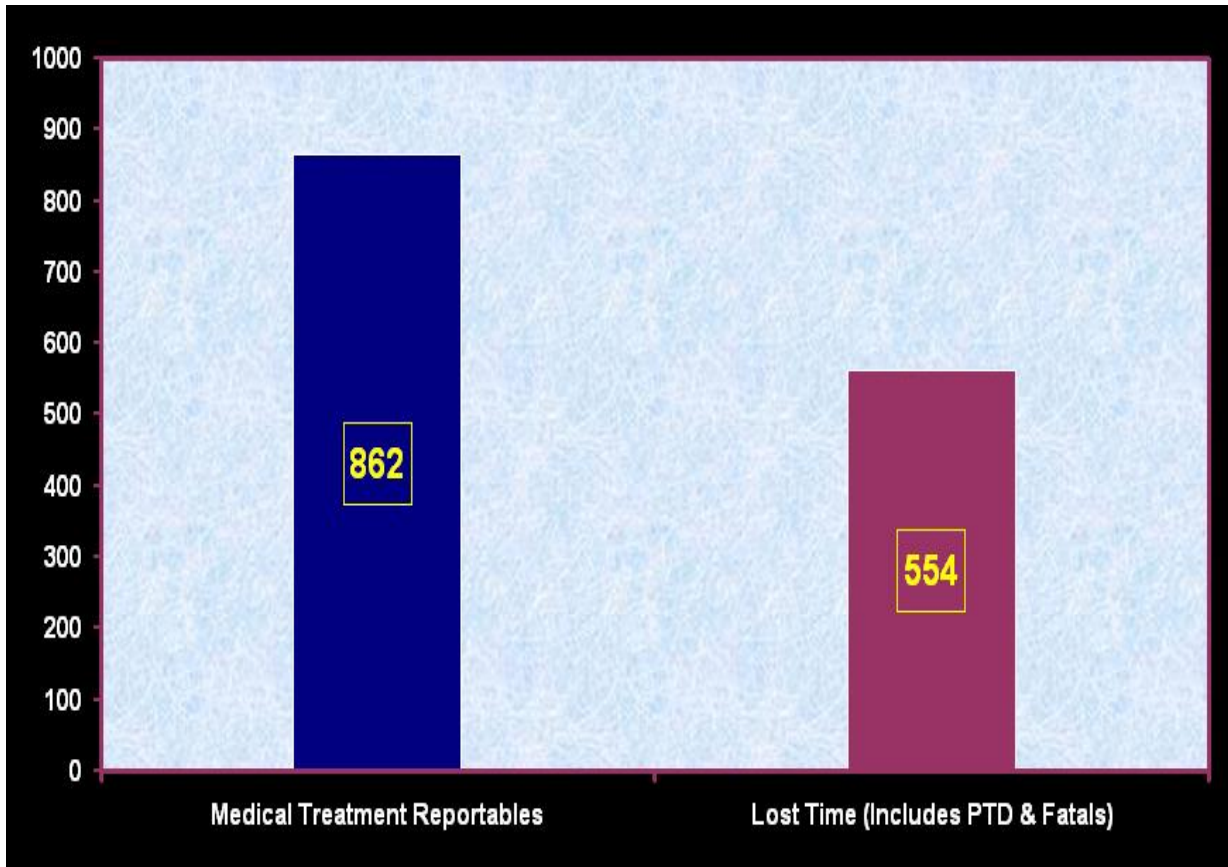
¹ IMA Team members: Darrell Smith, IMA-NA (Co-Chairperson); John Kelse, R T Vanderbilt; and Jim French , U. S. Borax Inc. MSHA Team members: Mike Hancher (Co-Chairperson), Bill Wilson, and Michael Franklin

* This product was developed as part of the MSHA Alliance Program. It does not necessarily reflect the official views of MSHA. Use of the Alliance Program logo is reserved for MSHA and its active Alliance partners. The MSHA Alliance Program is to promote miner safety and health through voluntary partnerships, which provide training and education, outreach, technical assistance, and a national dialog on mine safety and health. For more information, contact MSHA at (202) 693-9641 or <http://www.msha.gov/alliances/alliances.htm>.

Number of Reportable Injuries by Accident Severity (2001 -2003)

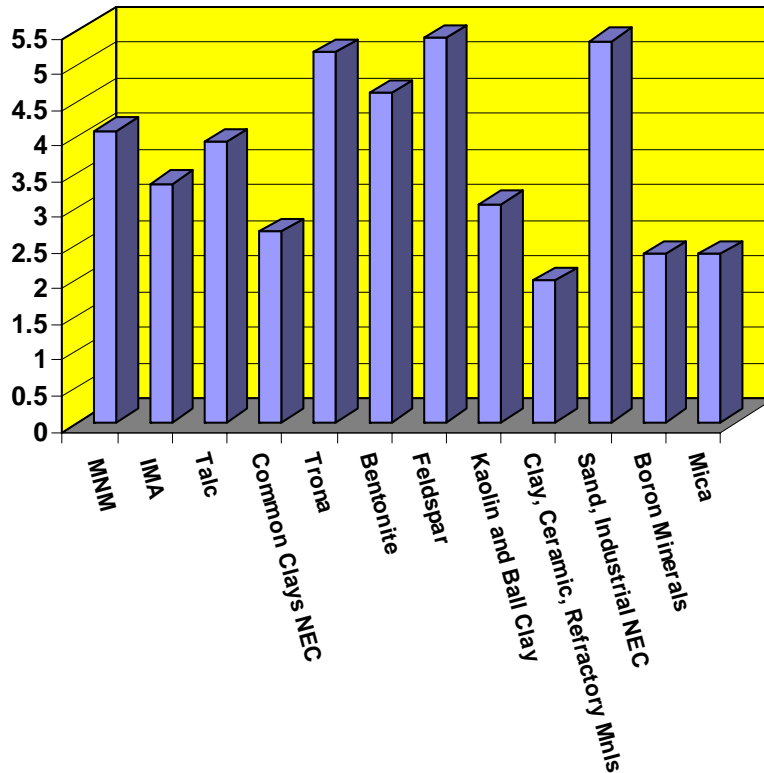


Industrial Minerals 2001-2003
Total MSHA Reported Injuries = 1416
(By Severity)



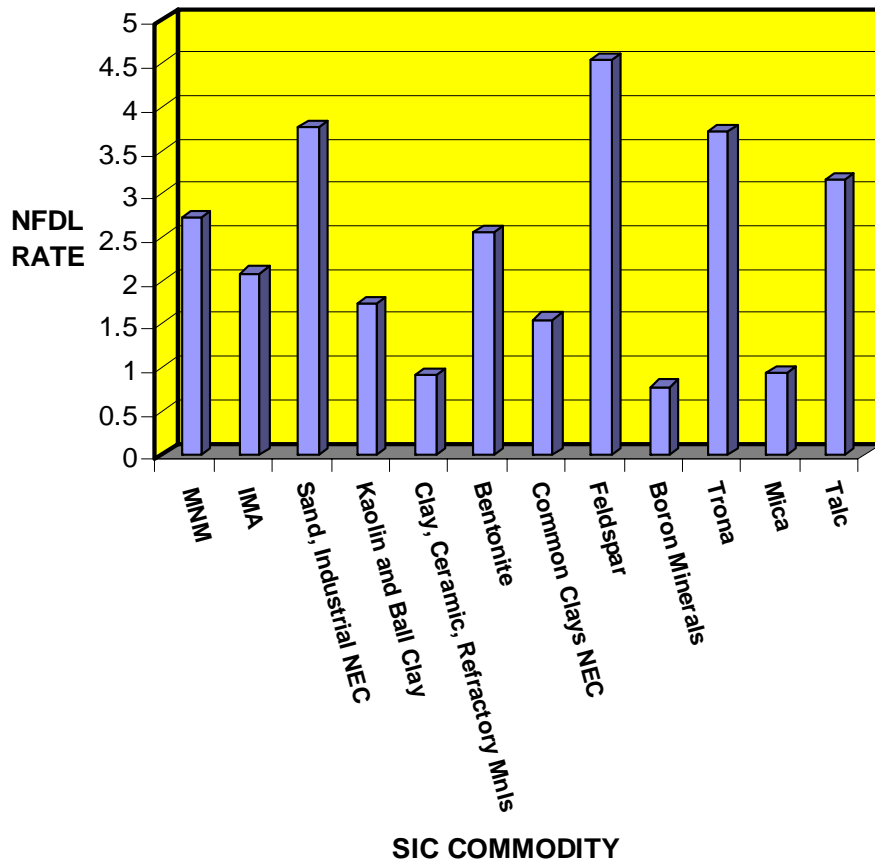
Note: PTD = Permanent Total or Partial Disabling injuries

TOTAL INCIDENCE RATE - 2003



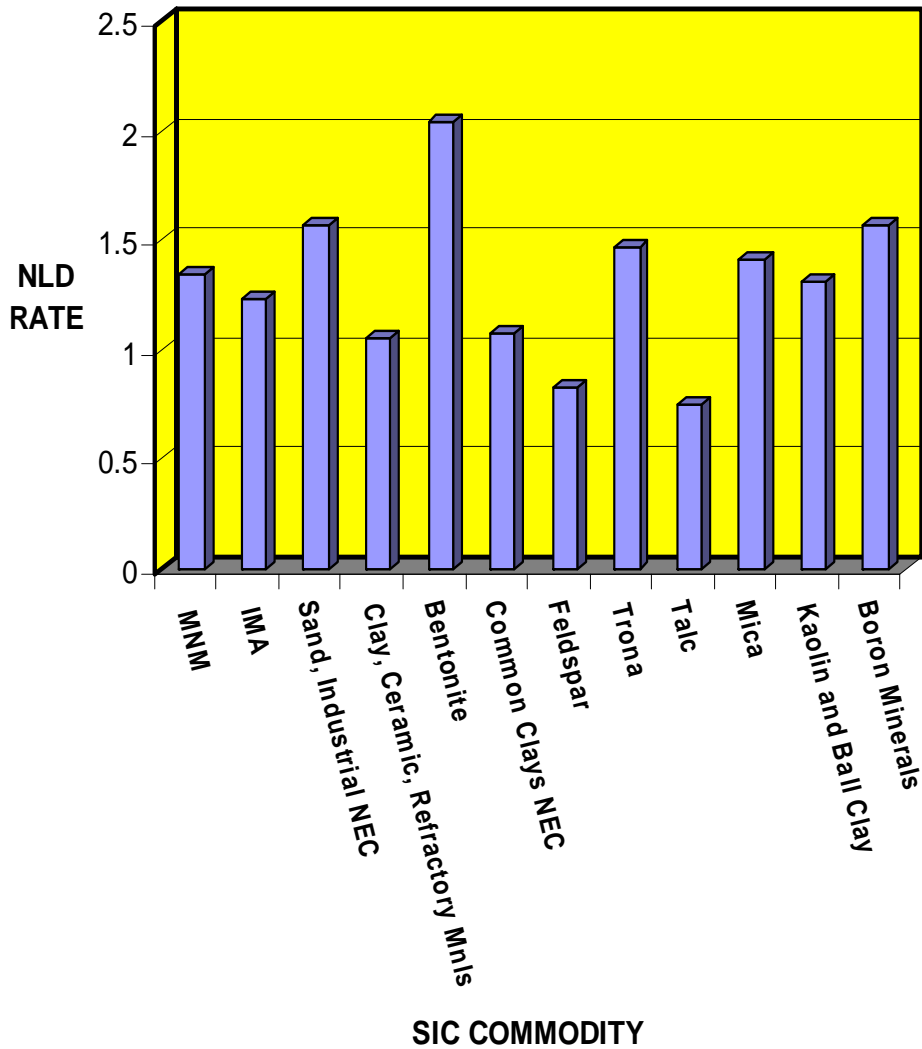
“Total Incidence Rate” includes the reportable injuries from fatalities through those with no lost work days, no restricted activities.

NONFATAL DAYS LOST, 2003



“Nonfatal Days Lost Rate” includes the reportable injuries from permanently disabling through injuries resulting in restricted activities only.

NO LOST DAYS, 2003

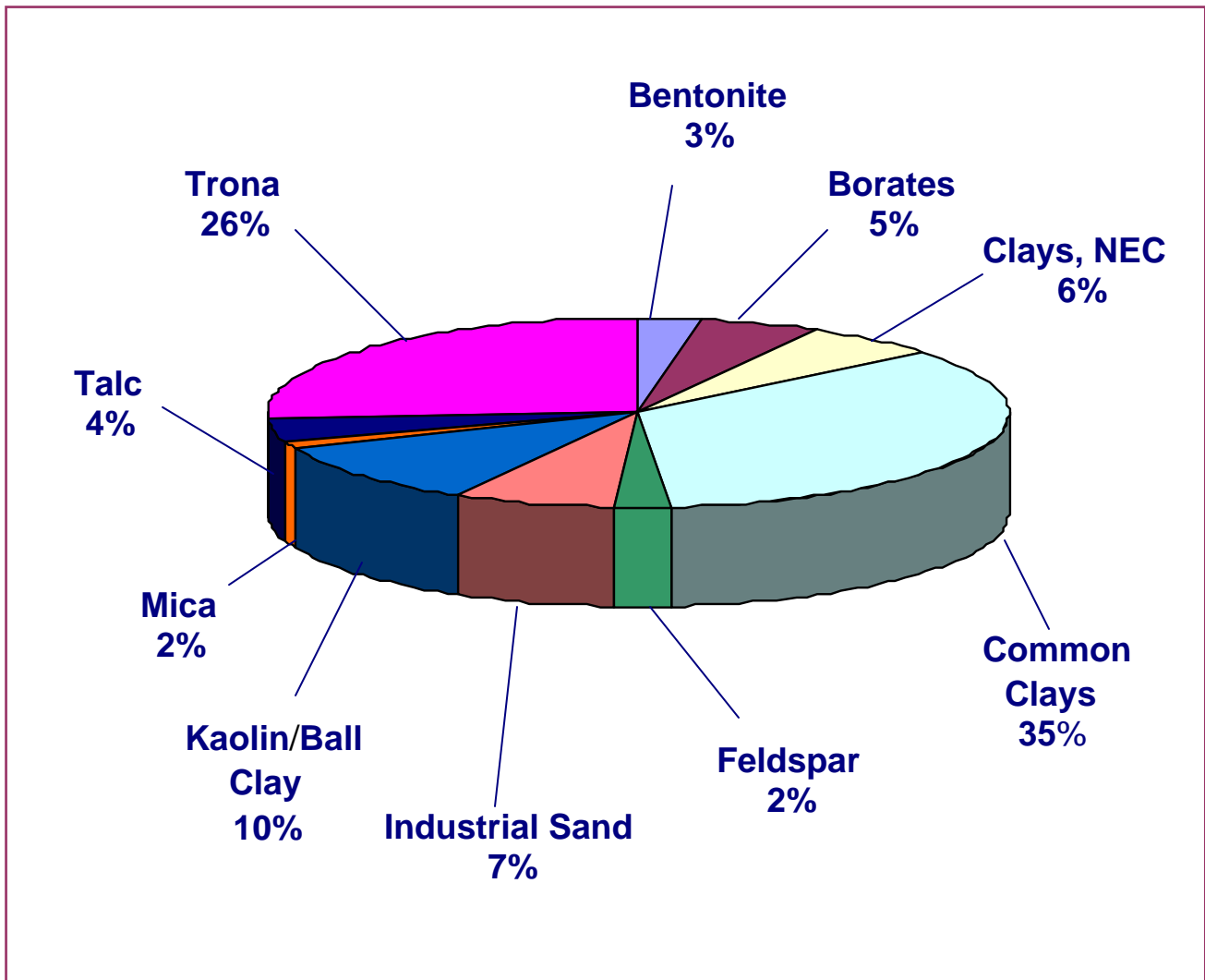


“No Lost Days Rate” includes the reportable injuries that do not result in lost work days or restricted activities.

Accidents by Commodity (2001 - 2003)

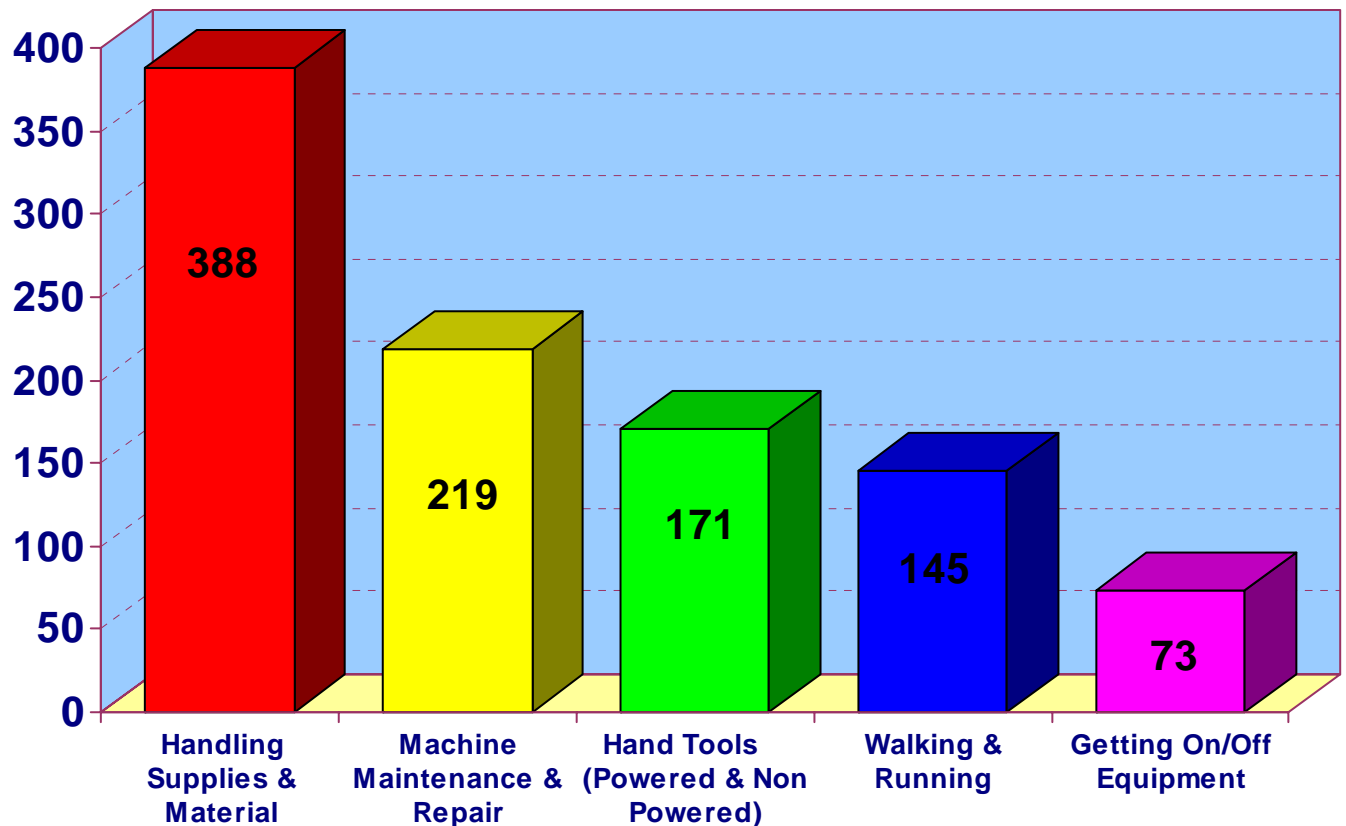
Total number of accidents by commodity is:

Bentonite	41	Borates	72
Clays, NEC	84	Common Clays	493
Feldspar	35	Industrial Sand	96
Kaolin/Ball Clay	152	Mica	22
Talc	55	Trona	366



Work Activities Resulting in Most Injuries (2001 -2003)

Five activities accounted for 996 injuries or 70% of the total. The activity classified as handling supplies and materials accounted for 27 % of the total. This activity included 1 fatality and 3 permanent total or partial disabilities. Other activities that accounted for most of the injuries include: machine maintenance and repair (15%); hand tools [powered and non-powered] (12%); walking or running (10%); and getting on/off equipment (5%). These four activities accounted for 1 fatality and 7 permanent total or partial disabilities.



Occupations Resulting in Most Injuries (2001 - 2003)

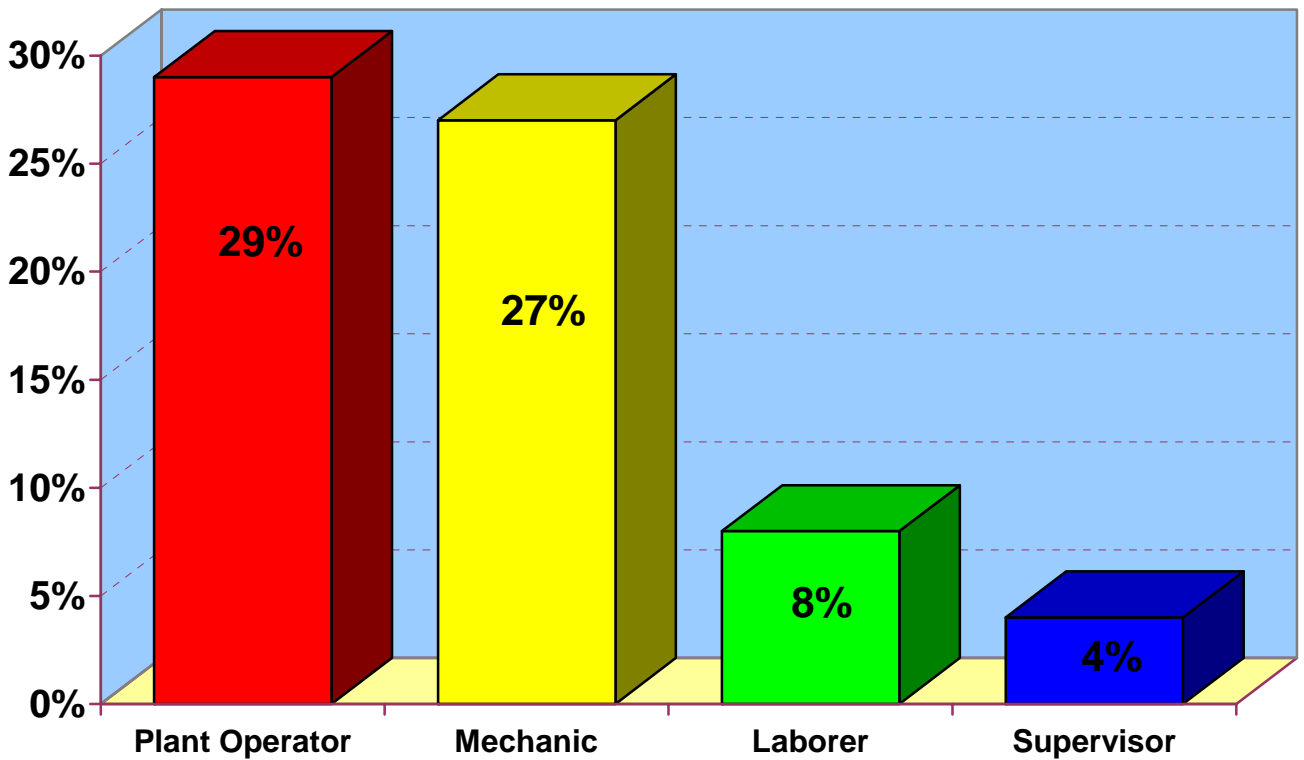
Four occupation categories comprised 953 injuries or 67% of the total. These occupations are as follows:

Sizing/washing/cleaning plant operator - 407

Mechanic/repairman/helper - 381

Laborer/utility man/bull gang - 107

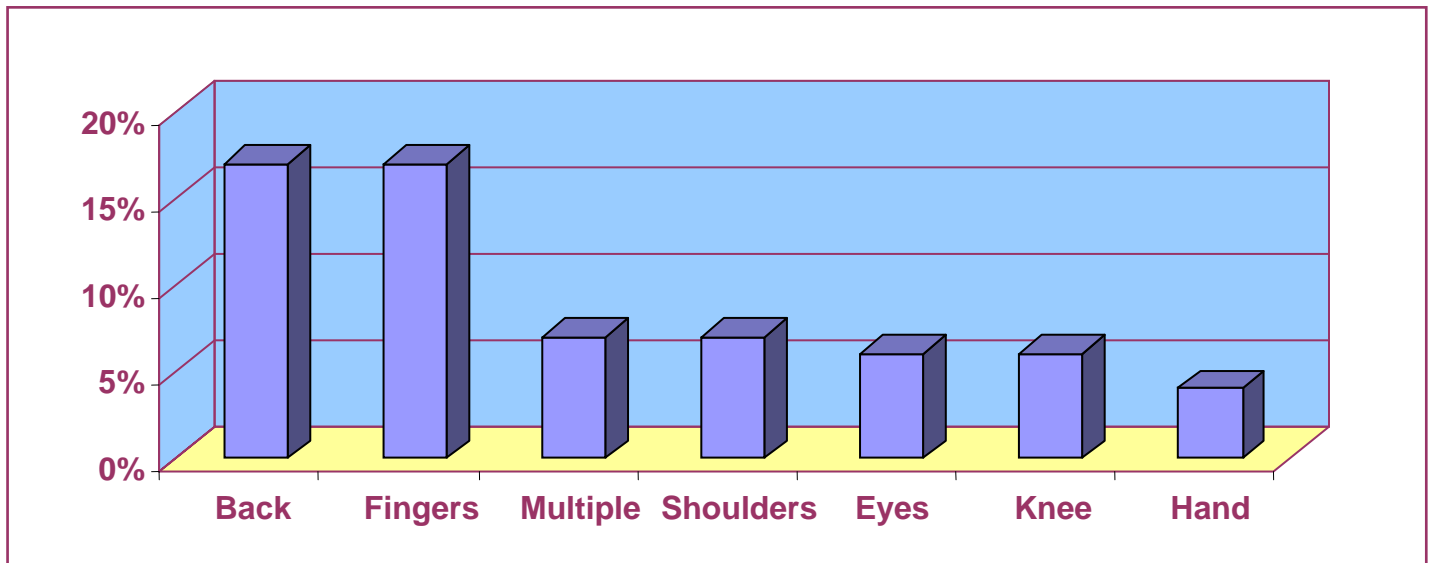
Supervisory/management/foreman/boss - 58



Body Parts Commonly Injured in Accidents (2001 -2003)

Back (Muscles/Spine/s-Cord/Tailbone)	240	(Number of Injuries)
Finger(s)/Thumb	237	
Multiple Parts	102	
Shoulders (Collarbone/Clavicle/Scapula)	101	
Eye(s) Optic Nerve/Vision	90	
Knee/Patella	90	
Hand (Not Wrist or Fingers)	60	

Five parts of the body were involved in 890 accidents or 63% of the total.



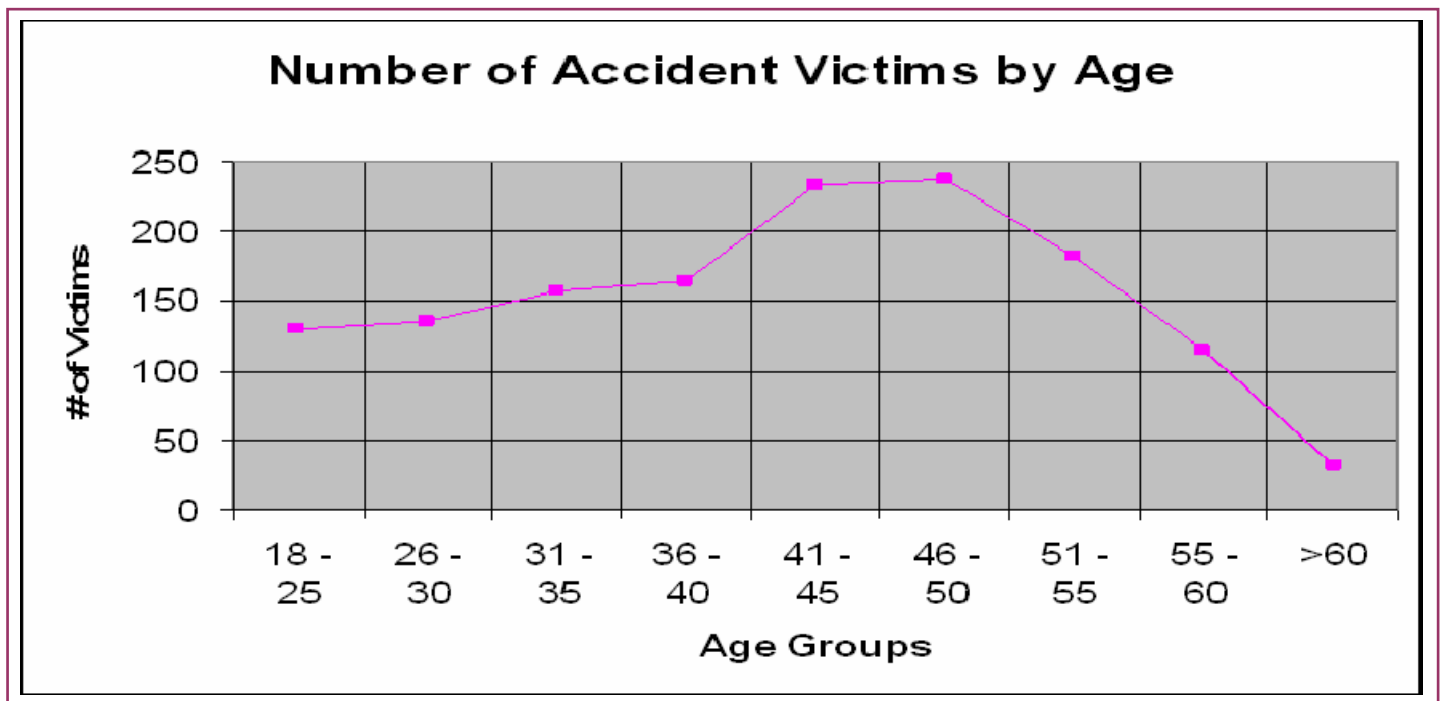
The types of injuries reported were:

Type of Injury	No. Reported	Percentage
Over-Exertion, NEC	231	16%
Struck By, NEC	180	13%
Over-Exertion in Lifting Objects	135	10%
Struck Against Stationary Object	100	7%
Struck by Falling Object	84	6%
Caught In, Under, Between, NEC	84	6%
Fall to Walkway or Working Surface	78	6%
Caught In, Under, Between Mvg & Sttn Obj.	59	4%
Contact W/ Hot Obj or Subst.	57	4%
Over-Exertion in Pulling/Pushing Obj.	56	4%

Accident Victims by Age Group (2001 -2003)

The percentages of accident victims by age group are as follows:

18-25	9%
26-30	10%
31-35	12%
36-40	12%
41-45	17%
46-50	17%
51-55	13%
56-60	8%
> 60	2%



Occupational Health Incidents Reported

■ Ergonomic	56 (38 Wrists)
■ Hearing	22
■ Pulmonary	11
■ Heat Stress	1
■ Misc.	1

The team concluded that:

- A high number of injuries occurred as a result of handling supplies and materials.
- Machine maintenance and repair, use of powered and non-powered handtools, and walking and running were other areas that need further analysis.
- Backs and fingers and thumbs were the body parts comprising the highest number of injuries.
- Plant operators accounted for nearly 30% (407) of the injuries that were analyzed. This number could be indicative of the work performed in the industrial minerals industries.
- Injuries to mechanics resulted in 27% (381) of the injuries reviewed.

Next steps for the Alliance team:

- Focus on accident prevention processes that emphasize the need for employees to analyze tasks before any work is performed. The team found that many accidents occurred, particularly in machine maintenance and repairs, because plans had not been initiated to evaluate the task and eliminate hazards before the task was started.
- Further study needs to be conducted to determine the trends in accident types, occupations, actual work activity, type of task, type of tools used, and the job experience and training of the injured employees.
- Identify trends and develop ways to prevent recurrences in these types of work activities.
- Examine the accidents further to determine if any common causal factors can be identified to reduce accidents and resulting injuries.

Goal

Study the trends and identify areas that the Alliance could address to reduce these types of injuries.