Hazard Identification and Near-Miss Reporting

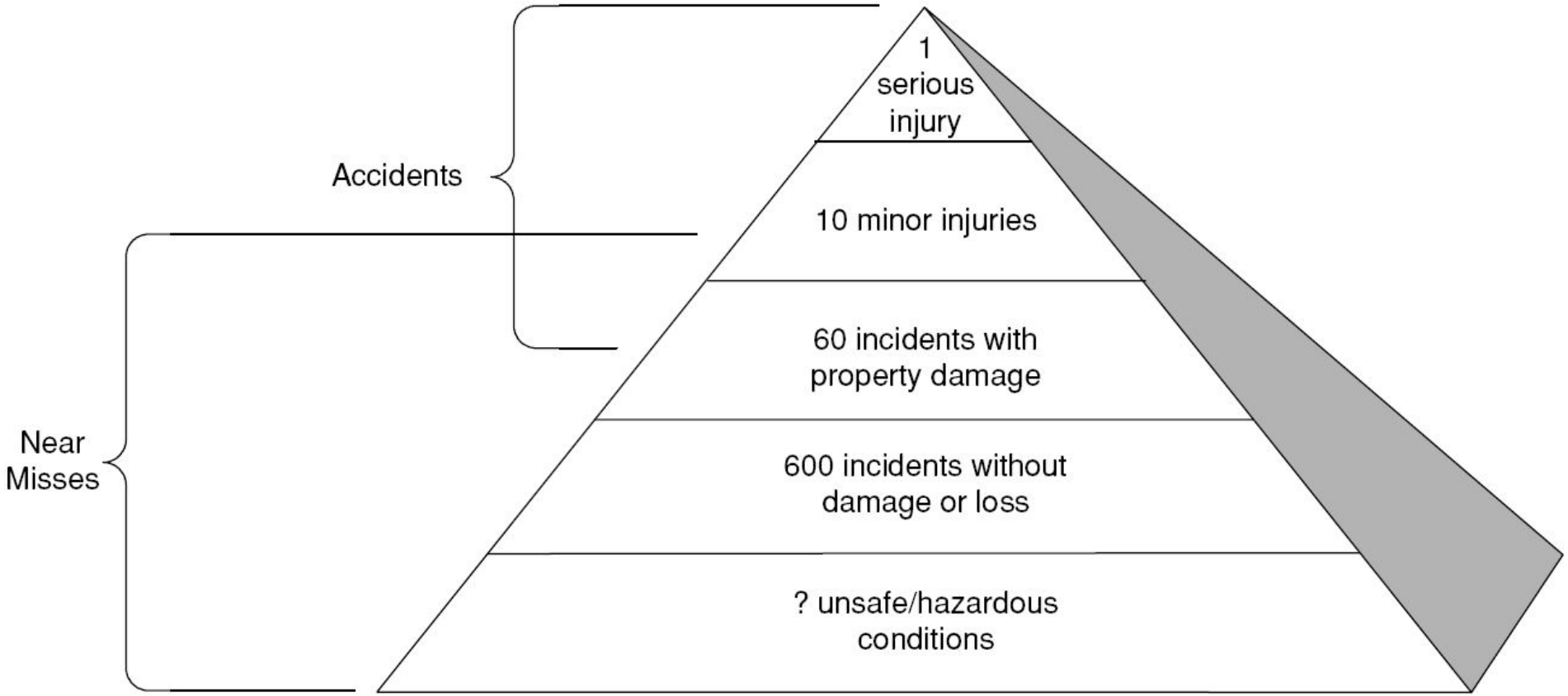
A training guide for CEBC researchers

Rev. 2-19-2010

Preventing Accidents

- Accidents are prevented by:
  - Identifying and communicating hazards and potential causes of accidents
  - Developing a plan to minimize the risk of an accident, and reduce the consequences if the accident does occur
  - Following the plan
  - Reporting and learning from “near-misses”
- Near-Miss reporting standard in industry

Safety Pyramid*



* *Risk Analysis* **2003** *23:3* 445-459

What is a “Near-Miss”

“An opportunity to improve environmental, health, and safety practice, based on a condition or an incident with potential for more serious consequence.”

Types of Near-Misses

- Unsafe conditions or behaviors
- Minor accidents and injuries that had potential to be more serious
- Events where injury could have occurred, but did not
- Events where property damage results
- Events where a safety barrier (fume hood, safety glasses, temperature alarm, etc.) prevented an injury or accident
- Events where potential environmental damage could result

Identifying Near-Misses

- Researchers' awareness must raised to identify hazards and near-miss events
- Does not have to be an incident, can simply be an unidentified hazard
- The "litmus test" of whether a near-miss should be reported:
  - *"Could someone (now or in the future) benefit by learning from the event/situation?"*
- Researchers should err on the side of reporting; Safety Committee will prioritize Near-Miss Reports

Reporting Near-Misses

- Reporting a near-miss is an opportunity to teach others
- Provided the researcher was not acting recklessly, no disciplinary action will be taken for reporting a near-miss
- Peer-pressure should encourage, not discourage, reporting near-misses
- Your near-miss report will be taken seriously by CEBC leadership

Lots of Near-Misses?!?

- Are high rates of near-miss reports a good sign or bad?
  - Near-misses will happen to ALL researchers from time to time. New experiments are being conducted. All experiments have some risk.
  - Near-miss reports mean that researchers are attuned to hazardous conditions and potential accidents…much better than being oblivious!!
- Remember, the goal is preventing injury or death, and your report may prevent a future accident!

What to Report?

- Reporting should be quick and simple
- Form on CEBC web site under “Lab Safety”
- Name, date and location
- Brief description of the near-miss and the cause(s)
  - Identify both direct causes and any “root” causes
  - Safety Committee may request additional info if clarification is necessary
- Suggested changes/improvements or lessons learned

What Happens Next?

- Lab Safety Committee will review each report in a timely fashion (high-priority reports reviewed as soon as possible)
- If necessary, additional information will be sought from researcher
- Committee will prepare response, including suggested changes to procedures if appropriate
- Anonymous Near-Miss Reports and Safety Lessons/ Reminders will be distributed to CEBC research community, added to searchable archive

How to Use the Near-Miss Reports

- Read the notices/reports promptly when distributed by the Safety Committee, assess whether the lessons learned could improve your experimental procedures
- Search the near-miss archive when developing new experiments/procedures, and incorporate lessons learned when developing your Standard Operating Procedures

Reference

- Some information in this presentation taken from:
  - Phimister, J. R.; Oktem, U.; Kleindorfer, P. R.; Kunreuther, H. “Near-Miss Incident Management in the Chemical Process Industry,” *Risk Analysis* **2003** *23:3* 445-459.