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*

- 1 serious injury
- 10 minor injuries
- 60 incidents with property damage
- 600 incidents without damage or loss
- ? unsafe/hazardous conditions

* Risk Analysis 2003 23:3 445-459

The Center for Environmentally Beneficial Catalysis
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 be 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: