CHAS Lessons Learned information collection form

Lab Events Data Collection

This Lessons Learned input form consists of two pages. The first page is designed to collect the information necessary to describe the incident being reported. The second page is designed to help us understand how this incident relates to a fully developed lab safety program as well as other events in similar laboratories. These questions can also help stimulate thought about ways that the event could have been prevented or preparedness for it improved. After you submit the form, it will be reviewed by members of review committee for clarity. Those submissions which we believe will be helpful to other laboratory workers will be included in our web site collection at http://www.dchas.org

Remember that response to any question is optional, however, the more information you provide, the more helpful the information we collect is likely to be to your fellow scientists. If you are willing to have us contact you with further questions or requests for clarification, you may include your e-mail address at the end of the form. That is the only purpose we will use your e-mail address for. Questions about this form can be directed to lessons@dchas.org

1. Narrative description of the event

2. Type of Event

- ☐ Fire
- ☐ Explosion
- ☐ Chemical spill or release
- ☐ Inhalation exposure
- ☐ Skin exposure
- ☐ Electrical shock or exposure to high energy source
- ☐ Injury from machine or equipment
- ☐ Exposure to Cryogenics
- ☐ Exposure to Biological Hazards
- ☐ Exposure to Radiation or Lasers

3. What was the consequence of this incident?

- [ ] Near miss (an event with no resulting damage)
- [ ] Equipment clean up required
- [ ] An event with a scientific or financial loss but no injuries
- [ ] First aid required but no loss of work time
- [ ] Medical treatment beyond first aid
- [ ] One or more lost work days
- [ ] Permanent Disability or Death

Other (please specify)

4. What was the magnitude of the response?

- [ ] Handled by victim
- [ ] Assistance provided by others in lab
- [ ] Assistance from other campus resources
- [ ] External emergency response required

5. Specific Material(s) involved:

Chemical 1 (please include amount and concentration)

Chemical 2 (please include amount and concentration)

Chemical 3 (please include amount and concentration)

Unknown material

Biological materials

Other materials involved

6. What phase of lab activity did this event occur in?

- ( ) Process set-up
- ( ) Process start-up
- ( ) During an ongoing operation
- ( ) During an adjustment to an ongoing process
- ( ) During equipment maintenance or adjustment to a stopped process
- ( ) After process is completed
- ( ) Result of an event outside the lab

Other (please specify)

7. Type of laboratory

- ( ) Instrument Lab (minimal chemistry involved)
- ( ) Research Lab (chemistry changes irregularly)
- ( ) Higher Education Teaching Lab (well planned chemistry with supervision)
- ( ) Service Lab (long term stable chemistry)
- ( ) Secondary School Teaching Lab

8. Years of experience in this laboratory for the person most directly involved in the incident

- ◯ < 1 year
- ◯ 1 - 3 years
- ◯ 3 - 5 years
- ◯ 5 - 10 years
- ◯ > 10 years

Other (please specify)

9. Education level of person most directly involved

- ◯ Secondary student
- ◯ Undergraduate student
- ◯ Graduate student
- ◯ Post graduate education

10. Personal Protective Equipment in use

- ☐ Gloves
- ☐ Lab coat
- ☐ Foot protection
- ☐ Protective overalls
- ☐ Safety glasses
- ☐ Safety goggles
- ☐ Face shield
- ☐ Respiratory protection
- ☐ None

Please describe specific types of the Personal Protective Equipment used

11. Other Relevant Factors Present

- ☐ Working alone
- ☐ Working outside standard business hours
- ☐ Unattended Chemical Process

12. Amount of loss (include any that apply)

Number of people injured or ill

Dollar amount

Working time loss

Scientific losses (data, samples, equipment)

13. Describe the primary cause of the event

14. Is there additional information that would be useful to include about this event? for example, describe any lessons you learned from this event to prevent the incident from recurring.

15. Were there any opportunities to improve response to the event after it occurred?

16. Source of Information

- ○ Personal experience
- ○ Media report
- ○ Incident investigation follow up

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Factors Analysis

Under each category, identify items as contributing factors. We recognize that these factors can be ambiguous when applied to specific incidents, so please add comments as you deem necessary to further explain your "lesson learned".

17. Hazard Recognition Factors

	Direct cause	Contributing factor	Not a factor
Knowledge of the Scientific Community about the hazard	○	○	○
Lack of procedure	○	○	○
Legacy conditions that precede the current occupants	○	○	○
Chemical labelling	○	○	○

Comments on these factors

18. Hazard Management Factors

	Direct cause	Contributing factor	Not a factor
Chemical quantity or concentration	○	○	○
Improper procedure	○	○	○
Poor equipment maintenance or design	○	○	○
Equipment malfunction	○	○	○
Facility limitations	○	○	○
Presence or absence of Personal Protective Equipment	○	○	○

Comments on these factors

19. Safety Culture Factors

	Direct cause	Contributing factor	Not a factor
Employee training	○	○	○
Communication between co-workers	○	○	○
Expertise of the chemical users	○	○	○
Laboratory inspections	○	○	○
Human factors such as confusion or improper motivation	○	○	○

Comments on these factors

20. Emergency Planning and Response Factors

	Direct cause	Contributing factor	Not a factor
Emergency equipment available and functional	○	○	○
Emergency responders aware of potential hazards	○	○	○
Emergency communications	○	○	○

Comments on these factors

21. What mitigating factors limited the extent of the incident once it occurred?

- ☐ Personal Protective Equipment
- ☐ Building Sprinkler System
- ☐ Fire Extinguisher
- ☐ Emergency Planning
- ☐ Emergency Response Resources
- ☐ Laboratory Ventilation

Other (please specify)

22. Suggested changes to prevent recurrence or minimize losses

- [ ] Hazard Elimination
- [ ] Personal Protective Equipment
- [ ] Engineering Controls
- [ ] Improved Training
- [ ] Administrative Controls

Please explain

23. E-mail address for Point of Contact for follow up information (optional)

If you are willing to answer questions about the event reported on this form, we would appreciate your e-mail address to facilitate this.