

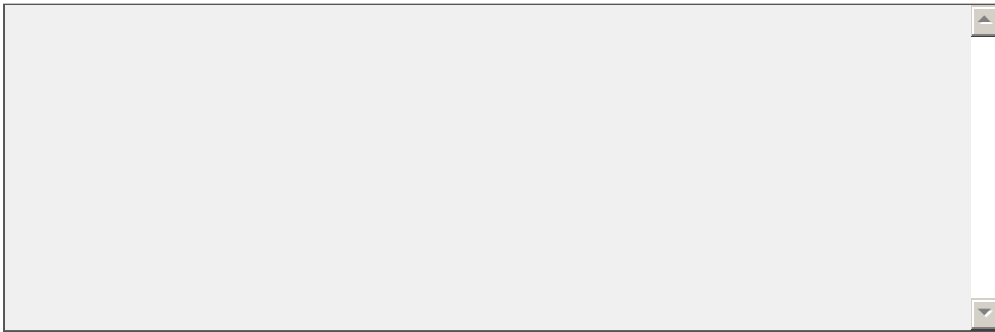
CHAS Lessons Learned information collection form

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

- | | |
|--|---|
| <input type="checkbox"/> Fire | <input type="checkbox"/> Electrical shock or exposure to high energy source |
| <input type="checkbox"/> Explosion | <input type="checkbox"/> Injury from machine or equipment |
| <input type="checkbox"/> Chemical spill or release | <input type="checkbox"/> Exposure to Cryogenics |
| <input type="checkbox"/> Inhalation exposure | <input type="checkbox"/> Exposure to Biological Hazards |
| <input type="checkbox"/> Skin exposure | <input type="checkbox"/> Exposure to Radiation or Lasers |

3. What was the consequence of this incident?

- | | |
|---|---|
| <input type="checkbox"/> Near miss (an event with no resulting damage) | <input type="checkbox"/> Medical treatment beyond first aid |
| <input type="checkbox"/> Equipment clean up required | <input type="checkbox"/> One or more lost work days |
| <input type="checkbox"/> An event with a scientific or financial loss but no injuries | <input type="checkbox"/> Permanent Disability or Death |
| <input type="checkbox"/> First aid required but no loss of work time | |

Other (please specify)



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4. What was the magnitude of the response?

- Handled by victim Assistance from other campus resources
- Assistance provided by others in lab 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 During equipment maintenance or adjustment to a stopped process
- Process start-up After process is completed
- During an ongoing operation Result of an event outside the lab
- During an adjustment to an ongoing process

Other (please specify)

7. Type of laboratory

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

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

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

Other (please specify)

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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.

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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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of procedure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legacy conditions that precede the current occupants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chemical labelling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments on these factors

18. Hazard Management Factors

	Direct cause	Contributing factor	Not a factor
Chemical quantity or concentration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improper procedure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poor equipment maintenance or design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Equipment malfunction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facility limitations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presence or absence of Personal Protective Equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments on these factors

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19. Safety Culture Factors

	Direct cause	Contributing factor	Not a factor
Employee training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communication between co-workers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Expertise of the chemical users	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Laboratory inspections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human factors such as confusion or improper motivation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments on these factors

20. Emergency Planning and Response Factors

	Direct cause	Contributing factor	Not a factor
Emergency equipment available and functional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emergency responders aware of potential hazards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emergency communications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments on these factors

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

- | | |
|--|---|
| <input type="checkbox"/> Personal Protective Equipment | <input type="checkbox"/> Emergency Planning |
| <input type="checkbox"/> Building Sprinkler System | <input type="checkbox"/> Emergency Response Resources |
| <input type="checkbox"/> Fire Extinguisher | <input type="checkbox"/> Laboratory Ventilation |

Other (please specify)

22. Suggested changes to prevent recurrence or minimize losses

- | | |
|--|--|
| <input type="checkbox"/> Hazard Elimination | <input type="checkbox"/> Personal Protective Equipment |
| <input type="checkbox"/> Engineering Controls | <input type="checkbox"/> Improved Training |
| <input type="checkbox"/> Administrative Controls | |

Please explain

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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.