

Physics Department Incidents Log

Incident No.	2005 - 01	Date of Report:	11/23/2004
Reportable/Classification:	Non Reportable As per E. Sierra	Date of Incident	10/20/2004
Status	Final ES&H Committee Report		
Groups Involved:	Physics personnel, Plant Engineering, Contractor		
Investigation Committee:	S. M. Shapiro, R. Ernst, T. Muller, and J. Timko		

Description:

At approximately 1130 hours on Oct. 20, 2004 a tree limb struck and broke a plate glass window in Rm. 1-60 in building 510 approximately 4 feet from where an employee was sitting at her desk with her back to the window. The branch came from a tree in the Physics courtyard that was being trimmed by a Plant Engineering contracted arborist from North Shore Tree and Landscaping. No injury was incurred, but had the employee been sitting at her computer, which is located adjacent to the window, an injury due to the spreading glass might have occurred. As might be expected she was very startled and disturbed by the unexpected noise and shattering of the window. Plant Engineering (PE) performed an incident investigation and their report and the original work permit are attached. A Physics Department Incident Investigating Committee, appointed by the Department Chair, interviewed the employee who inhabited the room during the accident, the Physics ES&H Coordinator (ESHC), the Building Manager (BM), and the PE originator of the work permit. The committee also toured the courtyard where the accident occurred. The Physics employee was extremely upset by the manner that PE conducted the investigation since she was never interviewed and probably had the most knowledge about the result of the falling branch. She expressed concern that there were many factual inaccuracies and the PE report was an intentional cover up. The Physics Department ESHC contacted the ORPS Categorizer who declared the incident 'not reportable' because there was no injury to personnel, nor was it likely to have caused serious injury. The latter is defined as requiring hospitalization for more than 48 hours.

While the investigation committee does not believe there was an intentional cover up of the incident, based upon the comments of the interviewees, the report did seem to minimize the incident. For example, the PE report stated that the branch that broke the window was 1-1/2 inch diameter, whereas several witnesses clearly stated it was at least 3-4 inches in diameter and inspection of the cut part of the tree confirmed their statements. The branch was clearly higher than the 10 feet stated in the report. The photographs do not depict the state of the room at the time of the accident; the blinds were up and the curtains were not closed. The PE investigation failed to reveal that the workers continued their tree work for about 10-15 minutes after the accident occurred. The Physics ESHC was the person who told them to stop working. It is unclear of the whereabouts of the BNL laborer who was assigned as an escort for this work group when the accident occurred and why he didn't stop work immediately. An interviewee stated that he was on a bathroom break.

The contractor had gone through contractor training, but there were two violations of procedures that raise the question of the thoroughness or applicability of the training:

- 1) The contractor continued to work after the incident occurred and people on the ground must have known that an accident occurred. No "stop work" order was issued until the ESHC told the workers to stop, approximately 15 minutes after the occurrence.
- 2) Before the accident could be investigated the contractor disturbed the scene by removing the branch from the window.

Root Cause:

Failure of the PE, the building manager and the contractor to properly consider hazards associated with falling branches next to windows of occupied offices. There was a difference of opinion between individuals on the applicable standard safety practices used by tree trimmers. Therefore the initial practice of allowing the tree limbs to drop may have been consistent with general (industry) practices, but did not meet the laboratory wide objective to having appropriate redundant measure of safety in the work place. It was noted that after the incident the work procedures were changed to include roping down branches and the use of plywood to protect windows.

Contributing Causes:

- The PE originator does not typically write work permits, this work permit was an exception due to the assignment of contractor to perform the work.
- The BM was not signatory to the work permit. If he had seen the work permit he might have foreseen the hazard.

- A requirement within the Work permit was not followed. The PE person was supposed to be present at all times during work. (The understanding of the committee is that the assignment of the PE person was not a laboratory requirement for the contractor to perform the work. The assignment was made in part because this was the first time the contractor had performed work on site.)

Corrective Actions (PE Group):

The incident will be part of discussions at the Ground Maintenance staff members' monthly meeting, which includes safety topics and lessons learned from incident reports.

Corrective Actions (Department):

Chair of this investigation committee will meet with J. Tarpinian to discuss contractor training and verify that it properly conforms to BNL safety procedures, such as stop work and accident investigation procedures. (Completed 11/22/04)

Group Safety Coordinators (GSCs) will be informed and there will be discussion of this incident at the next GSC meeting, Group Leaders will be briefed, and the Department will be informed of the incident at the next Department Meeting.

Lessons Learned:

- Work such as this has a danger element and is disruptive to the work environment due to the noise and limited access to doorways. Effort should be made to perform these tasks during non-working hours such as weekends.
- The BM should review all work permits where work is performed in or around 510.
- All individuals, including witnesses to an incident should be interviewed about the incident. A witness should receive the draft report and be allowed to comment on the contents. The current review process allows for the potential of misunderstandings to develop. As an example of misunderstanding from this incident: The report included pictures of the office window scene after the incident, but did not note that the scene had been changed. Specifically the blinds had been lowered and curtains moved inward. The employee and others reviewing the report believed the change had been deliberate to minimize the appearance of risk of injury from the incident. The committee subsequently learned that initial responders from Plant Engineering had lowered the blinds and moved the curtains as a safety precaution due to the remaining broken glass in the window. It is not clear that the incident investigator (who arrived after the alteration) was told of the change.
- An accident scene should not be disturbed until an investigation is carried out, unless there is a hazard to personnel. In the present case the tree was removed from the window before any person could investigate the scene.
- Laboratory managers need to be able to explain the basis of how an incident is categorized and the criteria for a reportable incident.

The above incident has been investigated and requires no further action.

S. Aronson, Department Chair

Date

S. M. Shapiro, ES&H Committee Chair

Date