



Recording, Investigation & Analysis of Accidents

Accident at Work

Dangerous Occurrence

Process No: 02 / 2010

Instructions: see Revision 1.1 of user's manual

May 2010

Case Number:	Record Date:
02	2010/01/26

Accident at Work, If (Yes) Fatal Non Fatal
 Dangerous Occurrence
 Notified to the Insurance company Yes NO If (Yes), Who notified: Confidential

PART I: RECORDING

Note: all fields marked with (E) are European harmonised variables (Eurostat, ESAW system).

Section 1		Victim Information
1.1	Full Name	Confidential
1.2	Address Postal code	Confidential Contact (Phone/Mobile): Confidential
1.3	Age ^(E)	31
1.4	Sex ^(E)	<input checked="" type="checkbox"/> Man (1) <input type="checkbox"/> Woman (2)
1.5	Nationality ^(E)	National 1 (Description and code in accordance with ESAW)
1.6	Occupation ^(E)	Gardener; elementary occupations 9 1 (Description and code in accordance with ESAW)
1.7	Department	DMPJ
1.8	Date of Admittance (company)	xxxx / xx / xx (no info) (yyyy/mm/dd)
1.9	Employment Status ^(E)	Employee with a permanent job (contract of unlimited duration) 3 1 2 (Description and code in accordance with ESAW)

Section 2		Accident Information
2.1	Time ^(E) /Date of Accident ^(E)	The accident occurred at 12:20 h, on 2010 / 01 / 21 (hh:mm - 24 hour clock) (yyyy/mm/dd)
2.2	Working Environment ^(E)	(Identify the workplace or working area where the victim was present at time of the accident - storage, construction site, quarry or mine, office, farming or forest zone, etc.) Garden, park 0 3 6 (Description and code in accordance with ESAW)
2.3	Full Accident Description. How did the accident happen?	<p>(Give the known circumstances of the accident, including what the injured person was doing just before the accident and what happen, i.e., the full sequence of events, and how the person was injured)</p> <p>The worker (gardener) was climbing a tree for pruning. He was equipped with the necessary personal protection equipment (PPE) to climb (harness, carabiners, safety rope, climbing rope and climbing ascender). After the rope was thrown, the anchorage point (a branch of the pine tree) was tested for strength; only then, the worker started to climb. When reaching approximately 10 meters of height, suddenly he falls down to the ground (free fall). This fall resulted in an open fracture to his left leg. The "INEM" (National Emergency Services) transported him to St John Hospital, where he was submitted to surgery to his left lower limb.</p> <p>After the event, the witnesses at the site noticed an open spring of the climbing ascender on the floor.</p> <p>Additional Information (gathered after the event)</p> <p>1. the open spring (of climbing ascender) on the ground was a direct consequence of the fall, rather than its cause; 2. the main failure was the <u>absence of the Prusik knot</u> (it would have locked the fall).</p> <p>Attachments: <input checked="" type="checkbox"/> Photo(s) <input type="checkbox"/> Sketch(s) <input checked="" type="checkbox"/> Other(s) Hospital report (emergency room); statements of witnesses.</p>

2.4	Active Failures	(In this field, all the "active failures" directly involved in the accident should be identified) - see Section 3 of the user's manual. Later you will investigate the factors that have contributed to them. 1 ^o - The injured person did not make the Prusik Knot on the climbing rope (before climbing) 2 ^o - The injured person suddenly falls from height -10 meters (last deviant event)	
2.5	Deviation ^(E) and Material Agent ^(E)	(Identify the deviation from normal activities or conditions, which led to the accident - the event that corresponds to the <u>last active failure</u> and has caused the accident. The deviation could be, for instance: fire, leak, fall, slipping, wrong body movement, loss of control, etc.) Fall of person - from top of the pine tree 5 1 (Description and code in accordance with ESAW)	(The principal Material Agent associated or linked with the deviant event) Tree (pine) 1 8 0 1 (Name and code in accordance with ESAW)
2.6	Contact - mode of injury ^(E) and Material Agent ^(E)	(Describe how the victim was hurt "physical or mental trauma" by the material agent that caused the injury. The mode of injury could be, for instance: the contact with electrical voltage, hazardous substances, crash from fall, struck by object in motion, etc.) Vertical motion of the injured person - fall, against 3 1 (Description and code in accordance with ESAW)	(The principal Material Agent associated or linked with the injuring contact) Surfaces - at ground level 0 1 0 2 (Name and code in accordance with ESAW)
2.7	Witness(es)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If (Yes), number of witnesses: 3	(Fill in the Full name(s) and contact(s) of Witnesses) Full Name(s) : Confidential Contact(s): Confidential

Section 3		Injury Information	
3.1	Type of injury ^(E)	(The physical consequences for the injured person, e.g. bone fracture, wounds etc.) Open fractures 0 2 2 (Description and code in accordance with ESAW)	
3.2	Body part injured ^(E)	(The part of the body injured, e.g., facial area, hand, back, leg, etc.) Leg 6 2 (Description and code in accordance with ESAW)	
3.3	Days lost ^(E)	Anticipated (calendar days of absence from work) <input type="checkbox"/> Without absence <input type="checkbox"/> 1-3 days <input type="checkbox"/> 4-6 days <input type="checkbox"/> 7-13 days <input type="checkbox"/> 14-20 days <input type="checkbox"/> +21 days -1 month <input type="checkbox"/> 1-3 months <input checked="" type="checkbox"/> 3-6 months <input type="checkbox"/> 6 months or more Actual (after return to work): no info (confirm the total number of days absent; calendar days)	
3.4	Treatment of injury	<input type="checkbox"/> None <input type="checkbox"/> First aid only <input type="checkbox"/> Doctor/Nurse but no hospitalisation <input checked="" type="checkbox"/> Hospitalisation if the victim was hospitalised indicate the establishment: St. John Hospital	

Section 4		Sign Off (Recording)	
Signature of employer or representative: (mandatory) Confidential		Signature of Injured Person: (if available) Confidential	
Name in typescript: Confidential		Signature of Safety and Health Rep: (if applicable) Confidential	

PART II: INVESTIGATION & ANALYSIS

Note: Part II deals with the process of investigation and analysis. **Do not begin before the interview.** Refer to the "User's Manual" of RIAAT for better elucidation on this part of the process.

Investigation & Analysis Level* : Basic Medium level In depth
 * Determine the desired level of investigation & analysis for the accident/incident in question. You should also judge the likelihood of worst consequences. See RIAAT - User's Manual.

Assessment carried out by (person or team): **Confidential** name(s) **Confidential**

Section 5	People - Human Failures					
5.1	Classification	<p>What human actions were attributable to this Accident / Incident? (Explain briefly what happened and classify the failure from the cognitive point of view, e.g.: wrong or inappropriate movements, misjudgement, bad diagnosis, bad planning of an action, etc.): The immediate cause of this accident was losing balance and falling; however, the missing action in the sequence (lack of Prusik knot / forgotten) made the difference in terms of outcome. It should also be noted that he did check (correctly) the anchorage point on the tree, although has forgotten to verify the climbing equipment.</p> <div style="border: 1px dashed black; padding: 5px; margin: 5px 0;"> <p style="text-align: center;">Error Type</p> <p> <input checked="" type="checkbox"/> Slip or Lapse (1A) <input type="checkbox"/> Mistake (1B) <input type="checkbox"/> Violation (2) <input type="checkbox"/> None, Not applicable (3) </p> </div> <p>If it was a "violation" (i.e., conscious infringement of rules, although well intended), explain why the person did it: (not applicable)</p>				
5.2	Individual Contributing Factors (ICF)	<p>Were there any individual factors that may have triggered, or contributed to, the above behaviour / failure?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Distraction</td> <td style="width: 20%; text-align: center;">13</td> </tr> <tr> <td>Time pressure; near lunch time</td> <td style="text-align: center;">18</td> </tr> </table> <p>... add more rows if necessary</p>	Distraction	13	Time pressure; near lunch time	18
Distraction	13					
Time pressure; near lunch time	18					
5.3	Prevention	<p>What barriers could have prevented / controlled the above behaviours or faults? (e.g., physical barriers, work procedures, supervision, knowledge and skills, etc.)</p> <hr/> <p>1 - Check equipment before use (need to raise awareness)</p> <hr/> <p>2 - Use a "check-list" for dangerous tasks</p> <hr/> <p>... add more rows if necessary</p>				

Section 6	Workplace Factors (WPF)					
(These factors are not mutually exclusive and more than one may apply simultaneously)						
6.1	Factors	<p>What were the specific <u>workplace</u> factors that have influenced or have triggered the active failures identified in Part I? (e.g., repetitive work, insufficient illumination, inadequate tools or equipment, complacency with "risk taking" behaviours, slippery floor, lack of qualifications or insufficient training of persons, etc.)</p> <p>OBS: The victim was not accustomed to use this equipment to climb (he borrowed it from a colleague). Apparently, no other problems were identified in this category.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Equipment unavailable at the moment / place</td> <td style="width: 20%; text-align: center;">23</td> </tr> <tr> <td>Insufficient time; time pressure</td> <td style="text-align: center;">33</td> </tr> </table> <p>... add more rows if necessary</p>	Equipment unavailable at the moment / place	23	Insufficient time; time pressure	33
Equipment unavailable at the moment / place	23					
Insufficient time; time pressure	33					
6.2	Prevention	<p>What barriers could have prevented / controlled the problems identified above?</p> <hr/> <p>1 - Equipment always available at the place</p> <hr/> <p>2 - Better supervision; increased level of supervision</p> <hr/> <p>3 - Use "bucket trucks" whenever possible to prune trees</p> <hr/> <p>... add more rows if necessary</p>				

Section 7		Organisational & Management Factors (OMF) (These factors are not mutually exclusive and more than one may apply simultaneously)	
7.1	Factors	What organisational and management factors or conditions may have facilitated the previous workplace failures? (e.g., management of contractors, level of supervision, maintenance management, training policy, safety policy, etc.)	
		Purchasing policy (uniformity of equipment and tools)	15
		Level of Supervision (less than adequate)	22
		Identification of specific training requirements	42
		... add more rows if necessary	
7.2	Management Improvement and Control	What corrective actions are needed to improve the management of safety?	
		1 - Purchase identical / uniform equipment	
		2 - Create check-lists for dangerous tasks	
		3 - Provide continuous training to workers (to be discussed with management)	
		... add more rows if necessary	

Section 8		Legal Factors - H&S Legislation	
Legal Issues	(Check if any of the failures identified in sections 6-7 constitutes a legal breach and/ or if the applicable law is, by itself, more of a problem than a solution)		
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If (Yes), cite the law or regulation applicable (Column 1) and describe what needs to be done for compliance (Column 2)		
		1 - Law / Regulation	2 - Description
	1	Decree 50/2005, of 25th February	Establishes the minimum safety requirements of work equipment; in particular it covers mobile equipment and devices for lifting loads. Defines rules on the use of work equipment. Establishes a mandatory check of work equipment at the beginning of its use, at regular intervals and when there are exceptional facts that could heavily affect safety.
	2	Law 59/2008, of 11th September - art. 87	Employers should provide adequate information and training for the prevention of accidents and illnesses at the workplace.
		... add more rows if necessary	

Section 9		Sign Off (Investigation & Analysis)	
Signature of Investigator: Confidential		Date (year/month/day):	
Signature of Reviewer / or Team Leader: Confidential		Date (year/month/day):	

PART III: PLAN OF ACTION

Section 10 Verify your Risk Assessment

Before deciding the actual Plan of Action (Section 11), compare the statements in Part I and all the findings (Part II) with the applicable Risk Assessment (RA) records. Check if the hazards, human actions, etc., and the risks involved in this particular occurrence had actually been considered in the risk assessment(s). If RA exists and all the relevant risks were considered, ask why it failed to prevent this particular case.

There is RA for gardeners, but it should be reviewed. The specific task of pruning trees should be assessed on its own.

Establish whether or not the applicable RA is still good enough or needs improvement/ revision; if revision is recommended enter this in Section 11.

Section 11	Plan of Action		
	Priority: 1 - Short - term (< 1 month)	2 - Medium - term (1-6 months)	3 - Long - term (> 6 months)

This section must address the specific actions to be taken to prevent or control the problems/ faults identified in Part I and Part II

What?	Who?	Estimate Cost	Priority
<u>Whenever possible</u> use the bucket truck for works of pruning trees (planning)	Line manager of the worker		1
Store the equipment properly to prevent damage or degradation	Worker		1
Create specific check-list for climbing trees and/or establish a specific "permit to work"	Line manager of the worker Worker (to be validate by H&S Services)		1
In the choice (selection) of work equipment, consider: a) the conditions and specific characteristics of the work, b) the relevant H&S risks, and c) possible new risks resulting from its use. As far as possible purchase the same type of equipment for all workers.	Line manager of the worker H&S Services (technicians)		2
Provide more training to employees (requires further discussion; what type of training?)	Line manager of the worker H&S Services		2
Measure the effectiveness of training given to workers - establish a procedure	Line manager of the worker H&S Services		3

Section 12 Sign Off (Proposed Plan of Action)

Approved by: Confidential <i>(Signature of Responsible/ or Team Leader)</i>	Date (year/month/day):
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Section 13 Sign Off (Follow up/ Completion)

Confirmed/ Verified by: Confidential <i>(Signature of Responsible for follow up)</i>	Date (year/month/day):
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PART IV: ORGANISATIONAL LEARNING

Section 14	Lesson(s) Learnt / Discussion
14.1	<p>Lessons Extracted</p> <p>- Was any relevant lesson learnt from this particular case?</p> <p><input checked="" type="checkbox"/> Yes; explain (what lesson? how? who?)</p> <p>(Try to pinpoint the critical aspects; it may be useful to attach draws or photos of “wrong” and “right” situations to illustrate the objective. The statement registered here, may be the result of a group discussion when the plan of action was decided.)</p> <p>This demonstrates the need for better monitoring (supervision) and better planning of the tasks.</p> <p>It also shows the need to intensify training in critical areas and to evaluate the effectiveness of such training.</p> <p><input type="checkbox"/> No, Not Really; explain why not</p> <hr/>
14.2	<p>Use/ Application of Knowledge</p> <p>- Is this case eligible/ suitable for future training purposes?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, Not Really If (Yes), in what circumstances or occasions?</p> <p>During training sessions; use this case to raise awareness.</p> <p>OBS: This real case is useful to illustrate how certain little details can make a big difference.</p> <p>It also draws attention to good practice, as was the case with this worker testing the strength of the anchorage point, which is another “detail” equally important in this task. To raise awareness it is important to give visibility to both things: the opportunities for “failure” and the examples of “good practice”. Also, use this case to highlight the importance of checking the condition of work equipment (in this case, the climbing equipment).</p>

Section 15	Dissemination / Diffusion
Diffusion of Information	<p>WHOM - internal? (Decide who are the relevant workers/ managers/ groups/ occupations/ departments, etc., that should be fully aware of this case, including the improvement actions established.)</p> <p>Supervisors and gardeners who belong to the team of pruning; all other workers who are engaged in work at heights.</p> <p>WHOM - external? (External diffusion also recommended? Is this a <i>safety relevant lesson</i> to share with any of your business partners, suppliers, clients, etc.?)</p> <p>All our partners that carry out work involving climbing and pruning at height.</p> <p>HOW? (Propose the appropriate means of dissemination, e.g., letter, newsletter, meeting presentation, leaflet, “point-to-point” protocol, etc. - the physical means of dissemination will depend mostly on the company’s practices and available resources)</p> <p>Leaflet, newsletter, meeting discussion.</p>

Section 16 Sign Off (Organisational Learning)	
<p>Approved by:</p> <p>Confidential</p> <p style="text-align: center;">(Signature of Responsible/ or Team Leader)</p>	<p>Date (year/month/day):</p>

GUIDANCE NOTES TO FILL IN THE FORM

PART I RECORDING (Sections 1 - 4)

Part I is designed to ensure the company's **internal recording** of the essential information concerning the accident, which in all the EU countries is a legal duty of the employer (Art. 9 §1c. of Framework Directive 89/391/EEC).

This part is aligned with the Eurostat methodology for the production of European statistics; in Sections 1-3, all fields identified with an "E" are Eurostat harmonised variables and the corresponding codes may be used (*c.f.* linked document: http://ec.europa.eu/employment_social/news/2002/apr/1130_en.pdf).

Note that this internal record does not replace the (employer's or self-employed) legal obligation of reporting accidents to the responsible Authority (Art. 9 §1d. of Framework Directive 89/391/EEC) and/or Insurer.

PART II INVESTIGATION & ANALYSIS (Sections 5 - 9)

Part II directs the analyst to **investigate and register** the causes of the accident and their underlying factors; it is structured into four layers of concern: the person, the local workplace, the organisational/management factors and finally, the H&S legislation. An accident model is embedded in this investigation protocol and all the relevant details, including a set of classification schemes, are given in the User's Manual of the RIAAT process.

The first step is to decide the **appropriate level of detail**, since not all accidents have the same learning potential for improving safety. After **interviewing** the people involved in the accident, apply the decision tree proposed in the User's Manual. In RIAAT, there are three options for the investigation level: basic, medium and in-depth, depending on the particular circumstances. You may adjust the decision criteria to your needs. If you decide to go for an "in-depth" investigation, then Sections 5-8 must be completed.

Even at the very basic level, this Part of the process should help you complying with the minimum requirements of the Framework Directive 89/391/EEC (Art.6, §1-2), which prompts the employer to take the necessary actions for the control of risks. This will be the purpose of Part III.

PART III PLAN OF ACTION (Sections 10 - 13)

Section 10 intends to ensure that you are in possession of a valid **assessment of the risks** and/or that you revise it in the light of this particular occurrence (Art.6 §3a and Art.9 §1a of Framework Directive 89/391/EEC).

Section 11 prompts you to list and prioritise the **plan of action** needed to prevent new occurrences.

PART IV ORGANISATIONAL LEARNING (Sections 14 - 16)

This final stage helps you to make sure that the **significant lessons are extracted** (Section 14) and also **shared** (Section 15) with **key persons**. This feedback information is good practice for the continuous improvement of safety, which in turn, is the main goal of any H&S management system.

Case Number:	Record Date:
02/2010	2010/01/26

Attachment: Prusik Knot



Photo # 1 (Prusik Knot)