IRATA Work and Safety Report 08/01

Summary of incidents reported on Form 021 2006/2007

This summary was based on reading the incident forms sent to IRATA. Some had no detail of remedial action and in other cases comment has been added to what was supplied. Some incidents were followed up, so more detail was available. Many incidents were excluded as they happened with little reference to rope access, for example slips, trips, tools slipping, sunburn, when off duty etc.
Even without detail, this should be useful to show that such incidents are largely preventable and may prompt changes to procedures.
In the UK, PPE regulations require employer to ensure users are provided with appropriate PPE, also that the user has been trained and understands how to use it. PUWER regulations require work equipment to be suitable, safe to use and only used by people with adequate training.
From some reports, it appears that basic site safety induction may have been lacking. Employers must not take things for granted just because someone is IRATA qualified; proper training and supervision is essential. It is essential that realistic on-rope training is given, and correct PPE used, especially if potentially dangerous tools are to be used safely. Users of permit systems should note that several failures of equipment belonging to third party contractors, or their errors have caused injuries or near misses.
Serious incidents are marked in bold. Note that there were many hand and eye injuries which could have been preventable with PPE

Type of Incident	**Detail [note this may only include detail of one or two incidents even if there were several incidents]**	**Control measures / remedial action / solutions**
8x Falling object Small < 8kg	Some objects landed outside exclusion zone; lanyard often removed. (ii)Falling rock dislodged by rope above.	Keep lanyard attached. [Also see below] possible use of two lanyards Ensure realistic size of exclusion zone. (ii) Site visit prior to work starting each day, check site conditions after bad weather; avoid descending below loose rock.
Falling object Large	4x incidents with item dropped by third party contractors working above. (ii) non authorised workers entering exclusion zone	Permit system; overhead exclusion zone + sentry, avoid being under any overhead work where something could fall, due to system failure [e.g. one incident involved failure in crane control].
12x Eye injury	Wind blown grit, grinding, vegetation flicked into eye	Some injured even when wearing visor. Goggles provide better protection
6 x damaged, cut or burned fingers	(i) Trainee fast abseil – burned fingers (ii) Cuts or damage when tools slipped	Appropriate gloves for protection and dexterity (ii) ensure all PPE supplied is worn at all times
Muscle strain	Trainee used as casualty in 30 min mock rescue 2 days lost time	Risk assessment for use of live casualty/ real rescue if problem arises. Avoid use of live casualties, use manikin or weight bag. Use seat for mock casualty.
Elbow strain Several	Trainees unable to complete training, another unable to complete assessment	Quite common, but usually L1 trainees – so probably poor technique. Do warm up exercises and stretching before practical work.

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incidents		
Manual handling	Several incidents - muscle strain	Further training in manual handling, avoid solo lifting over 25kg weight
Type of Incident	**Detail [note this may only include details of one or two incidents if there were several incidents]**	**Control measures / remedial action / solutions**
Uncontrolled descent	(i)Trainee fell 1.3m to floor – did not hold control rope, back-up did not engage (ii) Lost control landed in water [**could have been fatal if onto hard surface]**	Stretch in back-up line may mean no back-up device will prevent incidents from very low heights. Consider crash mats in training area. Keep back-up device high/ do not hold shunt string for small descents. Closer trainer supervision. (ii) No detail. System failure. Refresher training if has not worked recently; check team composition eg. only 1 new tech per level 3 to allow good supervision. Consider 11mm/11.5mm dia. rope when using shunt as back up. Shorter cow's tail to shunt. Risk assessment to select most appropriate PPE i.e. descender and back-up with more fail to safe features/ less prone to operator error.
Rope failed by abrasion	Descended on back-up line, after working line failed mid-height at edge.	Pre-work site inspection. Great care with rope protection required on non-vertical rock face. Awareness that one protector may not be adequate. Abrasion usually causes noticeable vibration in the rope, so may be necessary to ascend and add protection.
Rope abrasion	Rope over rough parapet wall, rope protector was not adequate. Several abrasion incidents.	Pre-work visit for risk assessment, rather than on site improvisation; e.g edge rollers or similar, as one protector may not be adequate for some edges. Good supervision. In some cases damage was detected by before use checking..
Rope damage	Ropes left rigged, damaged in wind /abrasion	Remove ropes when not being used if possible, or tension and add more rope protection to ropes and contact surfaces. Before use checking of in-situ ropes.
Bee stings	Disturbed bee nest	Site visit prior to work commencing, PPE; awareness, of potential for allergic reactions and anaphylaxis; check team members for history of allergies. COSHH could be relevant /pesticide to control nest [see HSE ref 3 below], also First Aid requirements
Allergic reaction	Detergent splashes caused rash	PPE – gloves, goggles. Applies equally to use of other chemicals; supply, read and follow precautions from COSHH/ MSDS [material safety data sheets] also

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		be aware of potential damage to equipment.
Burn	Overalls on fire from sparks, when steel cut with Stihl saw	Correct PPE flame retardant overalls & apron, body position when cutting, to avoid sparks; consider also effects on harness, rope & equipment etc in the surrounding area. Fire extinguisher on site.
2x welding injury	(i) Hot slag hit neck. (ii) Molten slag dropped into boot x2	Correct PPE [see ref 1 below] flame retardant overalls & apron, seal overalls to boots & to gloves to gauntlets to prevent entry, consider overalls on top of harness [must not impede use of equipment]; consider possibility & effect of spatter on equipment, such as ropes below, or in a bag suspended below.
Fatality	Heart attack, not work related	Work at height medical; if concerns raised pre-mobilisation, then consider pre-job fitness test. Rescue system to be available at all sites to deal with such contingencies. Liaise with appropriate authorities
Type of Incident	**Detail [note this may only include details of one or two incidents if there were several incidents]**	**Control measures / remedial action / solutions**
2 x Ultra/ HP water jetting	(i) 2 x Cut through boot – minor damage to foot. (ii) Lost time -staff were not wearing protective PPE provided	Training & supervision; tool box talk; obligation to wear PPE; protective over-boots/ kevlar boots/ metatarsal guards; suitable pressure, consider use of longer lance. Ensure communications in case emergency shut down required. See also below
Air hose detached	(i) Near miss. air /water hose separated from coupling (ii) tap on end of airline blew off hitting operative on head	Code of practice available [see ref 2 below]. Work to procedure, risk assessment, tool box talk; Pre-use inspection; ensure communications in case emergency shut off required on compressor; only certified hoses and fittings to be used, hose whip checks and “R” clips, or hose coupling safety locks or both should be fitted; hoses firmly secured close to operator
Near miss rock fall on cliff	Concern caused work to stop. When returned to work next day, a section of cliff had collapsed	Site visit prior to work commencing; experienced geotechnical engineer brought in to check site safety. See also below
Landslide	6 injured, escaping down steep slope avoiding landslide. Work was on a road side cutting approximately 20 metres above the road at an angle of 40º. The slope above the cutting slid down towards them, partially burying some operatives.	Assumption of safety made could be due to easy angle of slope. Better understanding of soil mechanics. Geotechnical engineer to be on site full time to assess potential for slippages on steep slopes occurring whilst people are working below. If it poses a potential risk of collapsing, all potentially loose material must be cleared in a top down manner. Client must be informed and accept this requirement. Safety must override budgets.

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Structural failure	Person climbed 6m pole. The base slipped on mountings & pole fell backwards	Pole bases to be checked by engineer & certified safe. Level 3 also to do visual inspection before use
Load slipped	Multi-pod overturned	Multiple guy lines to stabilise head of multi-pod and legs bolted to floor
Heat exhaustion	Felt weak, told to descend, Fainted after descending; 42ºC and 74 % humidity.	Predictable preventative measures: short duration shifts; water and electrolytes must be available [‘camel-back’ tube fed, on demand supply is best]; buddy checking.
2x Dangerous occurrence PPE	2 x incidents of operatives sleeping on site without PPE; permission to have a break had been given; extremely hot conditions and hard physical work.	Basic training and supervision; tool box talk, follow procedures: go off-site to a safe area if PPE is to be removed; frequent breaks in less oppressive atmosphere, air conditioned if available, with access to plenty of water / electrolyte drinks.

References:

1 Health and Safety Executive Information Document: HSE 668/25 - PPE for welding and allied processes: practical guidance on assessment and selection http://www.hse.gov.uk/fod/infodocs/668_25.pdf

2 Abrasive Blasting: Code of Practice 2004 Queensland, Australia. http://www.deir.qld.gov.au/workplace/law/codes/abrasiveblast/index.htm

3 Health and Safety Executive leaflet on points to be considered when asked to treat a bee nest. http://www.hse.gov.uk/pubns/indg276.pdf

4 OPITO Trainee Blaster/Painter Training Standard: http://www.opito.com/library/industry_training_standards/blaster_painter_training_standard.pdf

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