

SAFETY CODE OF PRACTICE

The following technical guidelines are from the Safety Code of Practice 1996. ScreenSafe intends on updating and replacing these guidelines section by section. Please check the updates section of the ScreenSafe website for further information.

Please look at this as a guideline and ensure you undertake further research on areas of particular significance to your role in the New Zealand screen sector.

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1. AIRCRAFT – FIXED WING AND HELICOPTERS

HAZARDS

- Aerial wires.
- Chill Factor.
- Crashing.
- Dust and debris.
- Falling out or off the aircraft.
- Fire.
- Noise.
- Propellers, blades and engine exhausts.

INTERPRETATIONS

"Aircraft" includes fixed wing and helicopters.

GENERAL SAFETY PROCEDURES

Aircraft for the Transport of Crew and Cast Members and Equipment

The owner/operator of the aircraft shall hold a current Air Services Certificate or future Air Operators Certificate which allows them to conduct Air Transport Operations.

Pilot in Charge (PIC) Qualifications

There shall be a designated Pilot in Charge with the aircraft who should have 1,000 hours flying time on the category of aircraft with a minimum of 100 hours as PIC of the type of aircraft being flown. The PIC should have instrument rating for night flying.

Aerial Co-ordinator

In multiple aircraft situations consult the Chief Pilot on the need for an Aerial Co-ordinator.

Ground Controller

A person should be appointed as Ground Controller to control the movements of people, vehicles and equipment around the aircraft.

Operations Manual

The operator's Operations Manual shall contain provisions for all the flying situations desired to be carried out. These include but are not limited to:

- (a) flying below normal altitudes;
- (b) flying with the doors opened or removed;
- (c) flying with persons in other than approved seating; and
- (d) use of special camera or equipment mounts.

Flight Altitudes

Minimum altitudes as specified by the Civil Aviation Authority shall be observed. These currently are:

- (a) 1,000 feet over built up areas or highest structure; and
- (b) 500 feet over open areas.

Exemptions may be obtained from the Director of Civil Aviation.

Personnel

Only persons directly involved with the operation should be carried on the aircraft.

When an underslung load is being carried, passengers shall not travel in a helicopter. The exception is a load observer permitted at the discretion of the PIC.

Notification

All personnel should be advised when an aircraft is to be used. Appropriate safety instructions should be given.

Safety Briefing

Before the operation of all aircraft the pilot shall hold a briefing on all requirements, safety features and acceptable procedures for the flight for all crew and cast members involved in the shoot.

Plans, Graphics and Wire Hazards

Wherever possible plots, plans and graphics should be prepared to locate landing area, intended flight paths, designated emergency landing sites, and shooting locations, as well as any types of special effects. Wires and other possible hazards in the proposed flight area should be included.

Ground/Air Communication

Where the movement of the aircraft is required to be directed from the ground:

- (a) single channel two way communication between ground and air should be established and maintained at all times during the operation of the aircraft;
- (b) only one ground contact should be use;
- (c) the communication system should be tested before take-off; and
- (d) radio telephone frequencies including cell phones may need to be cleared with the Civil Aviation Authority – check with the PIC.

Smoking

There shall be no smoking within 15m of the aircraft or its refuelling vehicle.

Landing Area

Before starting the aircraft engine(s):

- (a) clear all debris and loose things from the area; and
- (b) when necessary, wet the landing area to minimise the dust hazard.

Engine Running

When an aircraft engine is running:

- (a) a qualified person shall occupy the pilot's seat and be in control;
- (b) the aircraft shall be restrained from forward movement;
- (c) no person or animal shall walk under or near the helicopter tail boom or behind the helicopter body; and
- (d) all personnel shall remain at least 15 metres away from the aircraft unless under the direction of a qualified person.

Working Around or Approaching Aircraft on the Ground

The PIC shall be in full command whenever crew or cast members occupy an aircraft while the engine is running.

Aircraft structures can be easily damaged. Follow the PIC's instructions for loading, pushing, and handling, sitting on or in, or laying any objects of any kind on or in the aircraft.

If an object falls into or against the aircraft, report it immediately to the PIC.

Approach helicopters from the front. Always stay within eye contact of the pilot, and only proceed when the pilot gives a clear hand signal. A diagram of the safe approach path to a helicopter is included in this section.

To prevent damage to the aircraft and injury to personnel:

- (a) carry equipment parallel to the ground; and
- (b) secure any loose clothing, materials or equipment.

Only animals that are performing and under the direct control of an animal trainer may be in the area of the aircraft.

Hearing and Eye Protection

Personnel working in or near aircraft should wear appropriate hearing and eye protection.

Chill Factor

There is a chill factor when working on aircraft without doors and around aircraft on the ground with the engine running. Personnel should dress to allow for this factor.

SECURING OF PEOPLE AND EQUIPMENT IN AN AIRCRAFT

Restraint of Crew Using Hand Held Equipment

When a door of the aircraft is removed or is in a fixed open position, the camera operator and any other crew adjacent to the door shall at all times wear a safety belt and restraint which complies with Civil Aviation Authority standards or NZS 5811 198 1, Industrial Safety Belts and Harnesses. The breaking load of the harness, belt and attachment shall be at least 15 times the weight of the person.

Restraint of Hand Held Equipment

Hand held equipment shall be securely attached only to the aircraft. The breaking load of the securing restraint and attachment shall be at least 15 times the weight of the equipment.

Firearms in Aircraft

Any personnel carrying firearms should advise the PIC before boarding the aircraft.

Securing of Equipment

All equipment and things within the aircraft shall be secured and checked by the pilot so as to ensure safe operation of the aircraft.

Anti-Static Protection

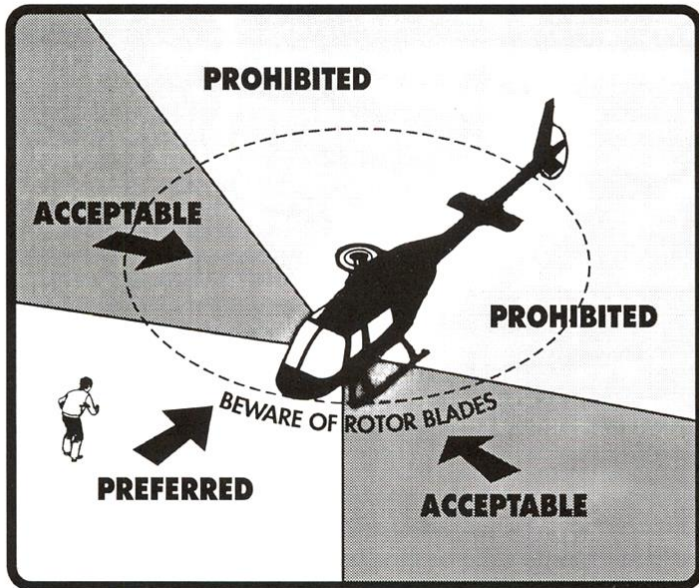
An anti-static staff or line (copper earth wire) should be attached in the appropriate manner when working with slung loads on helicopters.

Sky Diving

Refer also to the Sky Diving section.

Safe Approach to a Helicopter

From the Civil Aviation Authority poster Safety Around Helicopters:



2. ANIMALS

HAZARDS

Bites, kicks and scratches.

Crushes and bumps.

Falls.

Unexpected movement and noise.

INTERPRETATIONS

"Animal" means an animal provided for theatrical purposes in any film or video production.

"Trainer" means a person who handles and trains any animal. This includes a wrangler.

GENERAL SAFETY PROCEDURES

Consultation

The Trainer or Producer or person with responsibility should consult on the safe handling and transport of the animals and to ensure that adequate time is given to familiarise themselves and the animals to the routine for any given shot or sequence.

Responsibility for the Handling and Transportation of the Animal

The Trainer has the responsibility for the handling and transportation of the animal.

Risk of Injury from Handling Animals

There is a risk of injury to persons in the handling of animals on and around the set.

Uncontrolled Animals

All personnel should be aware of the unpredictability of uncontrolled animals on and around any location (eg farm animals, wandering dogs etc) and the effect that events such as bright lights or sudden noise may have on them.

Trainer to Animal Ratio

The Trainer and the Producer should determine the ratio of trainers or assistants to animals so as to ensure the safe control of the animals.

Set Construction

The set should be constructed to meet the requirements of the animals and action in the scene.

Provision of Animal Facilities

The Trainer in consultation with the Producer or person with delegated responsibility should provide facilities for:

- (a) loading and unloading; and
- (b) a stress free area.

Veterinary Provisions

The Trainer or person supplying the animal shall be responsible for ensuring that all necessary vaccinations and inoculations are current and that documentation is available.

Notification to Personnel

The Producer or person with delegated responsibility and the Trainer should communicate to all personnel that animals are on location. Appropriate information on safety matters should be included.

Supervision

All animal action should be carried out under the supervision of the Trainer or person in charge of the animal.

Permission Is Required

Permission to approach, handle or pet animals on or around a set should be obtained from the Trainer or person in charge of the animal.

Moving and Setting Up Equipment

Special care should be taken when moving or setting up any equipment near animals.

Distraction of the Animals

Be aware that animals can be easily distracted.

Use of Firearms and Ammunition Loading

The Armourer and Animal Trainer should consult on the handling of animals and firearms. The recommended maximum charge is a quarter charge when discharging a firearm in the presence of animals.

Sedation of Animals

Sedated animals can be unpredictable. The Trainer should consult with the Producer or person with delegated responsibility on the need for sedation and the safety precautions to be taken.

Where there is a potentially dangerous animal action, sedation equipment should be available.

Horse Falls

Under no circumstances shall horse falls be accomplished by tripping or pitfalls.

Shoeing of Horses

Horses being used on a production should be appropriately shod for the working surface.

3. ART DEPARTMENT AND SET CONSTRUCTION

HAZARDS

Dust and cut feathers.

Electricity.

Equipment from nail guns and saws, .to cherry pickers.

Falls.

Fire.

Hazardous substances including chemicals and solvents.

Set Collapse.

Weather conditions and wind.

Incorrect construction of breakaways.

Evacuation of Buildings Regulations 1992.

GENERAL SAFETY PROCEDURES

Consultation

The Producer or person with delegated responsibility and appropriate crew should consult and agree on the design and setting up of hazardous situations and any changes to the planned fabrication.

Erection and Dismantling

Erection and dismantling procedures should be done by a competent person.

Breakaway Construction

Breakaway windows, doors, walls, barriers and falling set pieces should only be designed and built by or in consultation with people experienced in this type of construction. *(see also Special Effects 20.&2)*

Time to Ensure Safety of Construction

Sufficient time should be allowed to ensure the safety of any construction.

Restricted Access

A set construction should be restricted to essential personnel only.

Fire Extinguishers

The Producer or person with delegated responsibility shall/should ensure that the requirements for fire extinguishers are met.

Fire Retardant Materials

For sets erected in public places, the Local Authority should be consulted on the use of fire retardant materials

Use of Foams

Particular care should be taken when using two-part polyurethane foams because of their toxicity and flammability.

Steps

All steps should **be** stable, slip-proof and constructed securely and built for the purpose. All steps should be cleared of ice, snow and mud as required.

Use of Powered Machinery and Tool Safety Guards

All powered machinery and tools should be used in a safe manner and with the appropriate guards.

Free Access

All sets should be constructed so as to allow free access around the outside of the set. Under no circumstances should a set or set construction block any emergency fire exit.

4. CRANES - CAMERA

HAZARDS

- Crane tipping over.
- Electric cables and wires.
- Falls.
- Imbalance when person steps off.
- Overhead obstructions.
- Struck by crane.
- Structural collapse of crane.

INTERPRETATIONS

"Camera Cranes" means manually powered counterbalanced cranes used to position cameras.

GENERAL SAFETY PROCEDURES

Design and Maintenance of Camera Cranes

All camera cranes should be designed and built in accordance with sound and accepted engineering practices and maintained in a safe working condition.

Safe Working Load Sign

A sign stating the maximum safe working load of the camera crane should be displayed on the crane.

Person in Charge

There should be a designated person in charge of the camera crane.

Consultation

The Producer or person with delegated responsibility and person in charge of the camera crane should consult on the adequacy of the camera crane for a particular sequence or shot.

Responsibilities of the Person in Charge

The selection and preparation of the camera crane and support surfaces.

The addition or removal of persons or equipment.

A crane should be attended at all times while being prepared for use or while in use.

Overhead Obstructions – ensure that adequate clearance is maintained at all times from overhead obstructions.

Unstable Surfaces – extra care should be taken when camera cranes are operated on an unstable surface (eg sand).

Restricted Access Area

The area covered by the swing of the arms is a limited access area.

Crane Crew Size

There should be adequate crewing of manned balanced camera cranes for safe operation.

Seats and Restraints

Cranes intended to be mounted by crew members should be fitted with seats and restraints. The person in charge should ensure that persons riding the crane use the seats and restraints where practical.

Minimum Clearance from Overhead Electric Power Lines

There are minimum clearances from overhead conductors depending on their voltages. Persons shall consult the local power supplier in each particular case. Otherwise, maintain a minimum of 4m clearance between the crane including any person or equipment on it, the swing of the arms, and the overhead conductors. Refer to the section on Electricity (section 6).

5. CRANES - MOBILE POWERED AND ELEVATING EQUIPMENT

HAZARDS

- Crane tipping over.
- Electric cables and wires.
- Falls.
- Incorrect assembly.
- Overhead obstructions.
- Struck by crane.
- Structural collapse of crane.
- Wind.

INTERPRETATIONS

"Mobile powered cranes and elevating equipment" includes but is not limited to cherry pickers, scissor lifters and mobile cranes. Excludes camera cranes.

GENERAL SAFETY PROCEDURES

Competent Operator

Only a competent operator should operate the equipment. The equipment should be operated safely and in accordance with the operating instructions and the appropriate Code(s) of Practice.

Consultation on Use and Communication System

The Operator and the Producer or person with delegated responsibility should consult on the following:

- 'Me preparation and use of the equipment including the support surfaces and risings.
- An adequate communication system.
- Overhead obstructions.

Safe Working Load

The safe working load of the equipment shall not be exceeded.

Calculating the Loading

In calculating the loading consider all the factors that affect the total loading. These include the lighting equipment, personnel and the cables suspended in air. Include the effect of wind. Appendix B contains typical weights of some common equipment. The actual weights should be checked at the time of use.

Certificate of Inspection, Safe Working Load (SWL) and Instructions to Operate

The equipment shall have a current certificate of inspection, the SWL displayed on the equipment and, for hired equipment, an operating and maintenance manual. On hired equipment this information may be displayed on the work platform.

Restricted Access Area

The area covered by the swing of the arms is a limited access area.

Minimum Clearance from Overhead Electric Power Lines (Conductors)

There are minimum clearances from overhead conductors depending on their voltages. Persons shall consult the local power supplier in each particular case. Otherwise, maintain a minimum of 4m clearance between the crane including any person or equipment on it, the swing of the jib and the overhead conductors. Refer to the section on Electricity (section 6).

Safety Harness

A safety harness or belt and restraint should be worn where practical.

Maintaining Hydraulic Pressure

In order to maintain hydraulic pressure in the rams, the power source should be run and the rams operated no less than once an hour.

Movement of Crane or Platform to a New Position

Personnel shall leave the crane or platform when it is being relocated.

6. ELECTRICAL

HAZARDS

- Arcing.
- Electric faults resulting in fire.
- Electric shock - general hazard.
- Electric shock - liquids in contact.
- Exploding bulbs/lamps.
- Overload.
- Equipment falling over.
- Electric cables and wires
- Overhead obstructions.
- Radiation burns.

INTERPRETATIONS

- "HMI" means a generic term for discharge lamps.
- "Hook-up" means any temporary connection for electricity supply from a fixed wiring installation.
- "NZECP" means a New Zealand Electrical Code of Practice.
- "Qualified. Electrical Engineer" means a person who,
 - (a) By virtue of qualifications in electrical engineering, is registered under the Engineers Registration Act 1924 or the Engineering Associates Act 1961; and
 - (b) was so registered immediately before the 1st day of April 1993.
- "RCD" means a Residual Current Device.

GENERAL SAFETY PROCEDURES

Qualified Persons

Only a qualified person such as an electrician, an electrical service technician, a registered electrical inspector, a holder of a provisional licence or a qualified electrical engineer may carry out electrical work in the Film and Video Production Industry. The limitations on the prescribed work they can undertake is set out in Regulation 16 of the Electricity Regulations 1993 and the person shall be the holder of a practising licence.

All Personnel Basic Knowledge

All personnel handling electrical equipment including lighting should have a basic knowledge of electrical safety.

Residual Current Devices (RCD)

Wherever practicable or where required by legislation (eg in a substantially conductive location) a RCD or similar protection should/shall be used.

Crew Plugging In

Always ask the gaffer/electrician before plugging any cable into a distribution board/socket.

Liquids around Electrical Equipment

Liquids (eg drinks) should not be placed on any electrical appliance or fitting.

Care of Electrical Cables

Avoid walking on, driving over, or standing on cables. Sudden or continuous weight can create a weak point in the cable and cause an electrical fault.

Personnel who are not part of a lighting crew should keep away from cables, lights, plugs, distribution boards etc.

CPR Qualified Crew

All lighting crew should be trained to carry out CPR to the standard required by the New Zealand Heart Foundation. Where only one lighting crew person is on location, another member of the crew should be qualified in CPR. All personnel should be encouraged to complete CPR training.

Notification of Electrical Hazards

All potential electrical hazards should be advised immediately as they arise to the Producer or person with delegated responsibility and to the Electrics Crew. All crew should be advised of the hazard as necessary and immediate steps should be taken to correct the situation.

Disconnection of Power in Adverse Conditions

Electric shocks are a high risk in adverse climatic conditions and in some water locations. In the event that the gaffer or electrician feels the risk is unacceptable, he/she should inform the Producer or person with delegated responsibility that the power shall be disconnected until the situation is rectified.

Minimum Clearance between Mechanical Equipment and Overhead Electric Power Lines

Overhead power lines (conductors) are an often overlooked danger. Be alert for the presence of overhead conductors when operating cranes, boom swinging, carrying tall objects, being in a boat with a mast up on the water or on a trailer on land.

When operating mechanical equipment near overhead electric power conductors the requirements of the Electricity Regulations 1993, clause 82 (3) and (5), and NZECP 34,1993 apply. There is a minimum clearance of 4m. Consult your local power supplier who may permit closer operation for lower voltages. Written permission is required to operate closer than 4m.

When travelling on the road, the requirements of the Transport Act 1976 apply.

DISTRIBUTION OF ELECTRICITY WITHIN THE LOCATION OR SET

Protection of Electrical Cables

Cables should be laid in troughs or covered in high traffic areas.

Coiled Cord Extension Sets

Leaving cord extension sets coiled on the cable drum or in a tight circle when in use causes induced voltage which heats the cable, and can result in an electrical fire.

Practical Electric Props

Practical electric props should be tested by an appropriately registered person before use.

Connecting Caravans, Campervans and Such Vehicles to an Electrical Supply

The electrical plug-in shall be in accordance with NZECP 1, 1993 where a caravan or such a vehicle is used in a caravan park.

Where a caravan or such a vehicle is wired to meet the requirements of NZECP 1, 1993 the correct connection should be used.

In all other situations a RCD or similar device should be used.

Weatherproofing

All distribution equipment in use on wet or exterior locations shall be protected against the weather. Equipment used outdoors shall have a minimum degree of protection of IPX3 in accordance with AS 1939, 1990.

HOOKING UP (A TEMPORARY MAINS SUPPLY)

Permitted to Hook Up

Only an appropriately licensed person may make a hook up.

Sufficient Time Available

Sufficient time should be allowed to make a hook up.

Signs

Signs should be posted near "hook-ups" warning personnel of their existence.

LIGHTING FIXTURES

Disconnection from the Power

Any lighting fixture should be turned OFF and disconnected from the power source before proceeding to work on it, eg: changing light bulbs/lamps.

Support and Restraint

All lighting fixtures or stands should be adequately supported or mounted to prevent tipping or falling.

Rain and wind can cause units to blow over. They should be secured against this event.

Hung fixtures shall have a separate safety chain or cable to prevent falling. The chain or cable should have welded links or be made of wire rope. Removable accessories (eg: barn doors) should be similarly restrained by their design or added restraint.

Any open faced unit should have protection where practicable (wire mesh, safety glass, gel) against the shrapnel effect caused by an exploding bulb/ lamp, particularly in close proximity to people.

'The filament in Thoriated tungsten filament lamps is slightly "radio-active". Handle carefully if the envelope is broken.

Protection of Electrical Equipment from Water

Where practical, all electrical equipment should be covered to prevent water from entering the equipment.

Total Immersion in Water of Lights and Fixtures

All underwater lights and fixtures connected to a 230v system shall have a RCD in the circuit.

Striking an HMI

The operator should ensure that the crew and cast members are well clear when striking an HMI.

Protection from Ultra Violet Light from HMIs

All personnel on set should be advised that various "are" and infra-red type lamps including HMIs emit much larger amounts of ultra-violet (UV) light than tungsten lamps. Care should be taken to protect against skin and eye damage when they are set up close to people.
NOTE: There are various filters available to reduce UV light.

All HMIs come with factory fitted UV filters. Fixtures should not be used. If the filters are cracked or broken. Micro switches should not be by-passed.

A UV filter/gel should be used when using open face lights; otherwise these can cause eye damage, headaches etc. for crew and cast members. A filter or safety glass lens also protects against exploding bulbs.

Colour Filters and Diffusion Material

All colour filters and diffusion material used on any production should be manufactured for that purpose.

Combustible Materials near Lamps

The use of any combustible material in close proximity to lamps should be avoided to prevent fire or the emission of dangerous fumes.

GENERATORS

Competent Person

A competent person should operate any generator.

Compliance with Code of Practice

The use of generators shall be in accordance with NZECP 4, 1993.

Earthing of Generators

Generators of 2.5kW or greater capacity shall be earthed or otherwise appropriately protected.

Electrical Safety of Generators

Generators are required to be tested annually to AS 3760 1990.

Fuel Operated Equipment

Refer also to the section on Fuel Operated Equipment (section 8).

LASERS

Qualified Operator

Only a qualified laser person shall operate laser equipment.

Notification and Briefing

When lasers are to be used, all personnel should be adequately informed and briefed before shooting commences.

General Care

Look away from laser lenses or beams.

Laser beams can reflect from some objects.

Competent Operator

Only a competent operator should set up and operate the equipment. The equipment should be operated in accordance with the operating instructions.

Positioning of Links

Establishing a signal path is the primary determinant of link positions, but care should be taken to ensure that suitable clearance is maintained from overhead power lines and public access ways.

Anchoring of Links

All link equipment should be suitably anchored to prevent it being knocked over or blown over by the wind.

Restricted Access Area

The hazard from radiation is dependent upon the power of the link and the distance from it, and is of a low order. The most susceptible parts of the body are the eyes. Under no circumstances should anyone look down a wave guide or into a launcher, and as a general safety measure should keep more than one metre from the front of an operating link.

7. FIREARMS

HAZARDS

Accidental shooting.

Explosion of ammunition powder and firearm.

Flash burns.

Fright.

Misfires of firearm.

Noise.

INTERPRETATIONS

"Armourer" means any person licensed to use the firearms being used on the set and competent to carry out the duties of the Armourer as set out in this Code.

"Arms Code" means the Firearms Safety Manual 1993 issued by the New Zealand Police.

"Firearms" means anything from which any shot, bullet, missile or other projectile can be discharged by force of explosive; and includes any especially dangerous airgun. Note that soft airguns and airguns must be treated as firearms even though a firearms licence is not required.

"Restricted Weapon" means any weapon such as a rifle, shotgun, or machinegun capable of automatic fire.

GENERAL SAFETY PROCEDURES

Firearm Licences

One or more of the following licences are required for the use of firearms in the Industry.

- (a) A Type A firearms licence allows the holder to have and use sporting type shotguns and rifles.
- (b) A Type C endorsement on a firearms licence allows the holder to have pistols and/or restricted weapons. There is an endorsement for "Employees of theatrical groups or film making organisations". This endorsement is subject to the condition that the holder shall not under any circumstance use live ammunition in the pistol or restricted weapon. This licence is subject to strict storage security and the firearms are registered with the police.
- (c) A Type D firearms licence allows the holder to buy and sell firearms by way of business.
- (d) A Type E endorsement on a firearms licence is required for people to have military style semi-automatic rifles and shotguns.

Notification of Police

The Producer or the person with delegated responsibility, or the Armourer shall notify the Police when planning the use of firearms.

Armourer

An Armourer shall be appointed on every set where a firearm, or a combination of firearms and imitation firearms, is to be used.

An Armourer or competent specialist archer should be appointed on very set where a cross-bow or arrows are to be discharged.

Factors for Selection of an Armourer

Knowledge and skill in the discharge of firearms using blanks in close proximity to other people is of prime importance in the selection of the Armourer. Experience in the military, police and sporting fields may not be sufficient.

Restricted Use of Firearms

Firearms may only be handled under the direct supervision of the Armourer or a person delegated by the Armourer.

Firearms in Motor Vehicles

It is an offence to carry a loaded firearm in or on any motor vehicle except pursuant to a permit issued by a commissioned Officer of the Police. Loaded includes ammunition in the breech, barrel, or magazine.

Imitation Firearms

An imitation firearm should be used instead of a real firearm whenever such an imitation would suffice.

Notification

Notification that firearms will be used should be communicated to crew and cast members. Information on the safe location and movement of persons on set and the use of safety equipment should be included.

Safety Equipment

The Producer or person with delegated responsibility shall/should ensure that appropriate hearing and eye protection and safety equipment is used.

Camera crew. When a firearm is directed towards the camera, a minimum thickness of 12.5mm Plexiglass should be placed between the camera crew and the firearm.

USE OF FIREARMS

Control of Firearms On Set

Any firearm or ammunition brought onto the set shall be registered with, and placed in the care of, the Armourer.

Any firearm or ammunition not immediately required on set shall be secured by the Armourer.

When not in use, handguns and restricted weapons shall be stored in a Police approved security, safe or strong room or in a locked carrying case of strong construction under the direct supervision of the Armourer.

Use of Firearms by Unlicensed Persons

An unlicensed person may use a firearm only under the direct supervision of the Armourer or a suitably licensed person such as an Armourer's assistant.

Live Ammunition

Whenever a firearm is being used with blank ammunition for dramatic production purposes, live ammunition for that firearm shall not, under any circumstances, be anywhere else on the set.

Use of Blank Ammunition

If a firearm is to be pointed towards a person:

- (a) The Armourer, the person firing the weapon, and the person(s) toward whom it is pointed should all be shown the loaded blank ammunition in the chamber or magazine.
- (b) There should be more than 10m between the firearm and the person(s) being pointed towards.
- (c) The firearm should always be pointed away from a person when discharged.
NOTE: Blanks have the potential to fragment and cause injury.

Use of Drill Rounds

Where scenes require the display of ammunition, only drill or dummy rounds may be used.

Storage of Powder On Set

Only powder for the loading of muzzle loading firearms may be stored on set.

Animal and Firearms On Set

The Armourer and Animal Trainer should consult on the handling of animals and firearms. The recommended maximum charge is a quarter charge when discharging a firearm in the presence of animals.

ARMOURER'S RESPONSIBILITIES AND DUTIES

Armourer's General Responsibilities

All firearms and ammunition on set shall be in the care and charge of the Armourer.

The Armourer Shall be Allowed Time:

- (a) To discuss with the Producer or person with delegated responsibility how any firearms might be used in a particular scene.
- (b) To point out any safety requirements needed.
- (c) To make sure that any cast member or stunt person using a firearm is fully aware of the safety rules for the handling and firing of such weapons.
- (d) To brief all persons on the set.

Modification of Firearms

Only a reputable gunsmith or Armourer shall modify a firearm that is to be fired.

Loading, Unloading and Use of Firearms

Loading and unloading should be carried out by the Armourer or the Armourers designated assistant(s) who shall be the holder of the relevant firearm licence(s).

In the event of a misfire or jam, only the Armourer should attempt any remedy.

If the Armourer is unsure as to what is causing the problem, the firearm should be taken out of use and rendered safe and secured until such time as the cause can be determined.

The firearm should not be used again until the Armourer informs the Producer or person with delegated responsibility that it is safe to do so.

EXPLOSIVE DEVICES AS PROPS

Explosive Devices as Props.

Only imitation or properly deactivated shells, grenades, or similar explosive devices shall be used as props on a film set, and these should be examined by a competent Armourer before being taken on set.

8. FUEL OPERATED EQUIPMENT

HAZARDS

Flammable fuels.

Toxic fumes.

INTERPRETATIONS

"Fuel operated equipment" includes internal combustion engines on vehicles, small engine equipment and lighting generators.

GENERAL SAFETY PROCEDURES

Ventilation

Adequate ventilation shall be provided whenever internal combustion engines are operated inside buildings or enclosed spaces to prevent the accumulation of carbon monoxide fumes. The exhausts from these should be vented to the outside of the building.

Storage of Fuel

All flammable liquids and fuels shall be stored securely in approved containers.

Refuelling

Refuelling of engines should be carried out in a safe manner by ensuring that there are no sources of ignition or potential sources of fire in the near vicinity of the operation.

9. HAZARDOUS SUBSTANCES

HAZARDS

Corrosiveness and compatibility.

Explosiveness.

Flammability.

Health effects.

Infection.

Toxicity - both short term and long term effects.

NOTE: Substances may be inhaled, ingested or absorbed into the body.

The effect is dependent upon the substance involved and the degree of exposure.

INTERPRETATIONS

"Hazardous Substance" means a substance (whether arising or caused within or outside a place of work) that is an actual or potential cause or source of harm.

"MSDS" means Material Safety Data Sheets. These provide concise safety and health information about the hazards and safety precautions of the substance and should be available for all products.

GENERAL SAFETY PROCEDURES

General

A large number of hazardous substances are in daily use. All hazardous substances can be safely used if proper work methods are adopted. Safer, alternative substances and/or work methods should always be adopted instead of using highly hazardous substances.

Notification

The Producer or person with delegated responsibility shall/should communicate to all personnel the presence and/or use of hazardous substances. Appropriate information on safety matters should be included.

Training, Information, and Supervision

All people handling hazardous substances shall/should be trained or supervised in safe handling procedures and provided with information and MSDS about the product. The use of hazardous substances shall/should be by a person with knowledge about the substance, its health effects, and emergency procedures.

Use of Hazardous Substances

When there is no alternative and it is necessary to use hazardous materials on the production site, the persons responsible shall inform the Producer or person in charge of the relevant hazards and risks. Appropriate protective equipment should be used.

Storage

Chemicals are required to be stored in suitable containers with labels providing information on safe use, storage, precautions, and first aid treatment. Hazardous substances may not always be in containers. An assessment of the likely hazards of all hazardous substances will highlight the appropriate safety procedures.

Transport

Transport of hazardous substances shall be in accordance with the relevant legislation.

Emergency References

Should any emergency occur involving hazardous substances advice may be obtained from:

National Poisons and Hazardous Chemicals Information Centre
PO Box 913
Dunedin Tel (03) 479 7248 Fax (03) 477 0509

10. LOCATIONS

HAZARDS

Alpine - snow, ice, avalanche.

Altitude - lower temperatures, reduced oxygen supply.

Crowds - general public getting in the way.

Electrocution.

Falls.

Fire.

Infection - unsanitary or contaminated situations.

Isolation - unable to contact or be contacted.

Night work - restricted ability to see or be seen.

Traffic.

Water - drowning and hypothermia.

Weather - extremes of temperature, exposure, sunburn, hypothermia.

INTERPRETATIONS

"Hypothermia" means a medical condition when the temperature of the body falls below 35°C.

"Public place" means but is not limited to footpaths, shopping malls, parks and buildings freely open to the public.

"Studio" means any building used as a permanent or temporary premises for film or video production.

GENERAL SAFETY PROCEDURES FOR ALL LOCATIONS

Pre-Production Reconnaissance

Whenever practicable sites should be investigated to determine potential hazards. Relevant experts and authorities with local knowledge should be consulted.

Emergency Plans

Consideration shall/should be given to developing an appropriate plan to cover emergency situations.

All personnel should be conversant with the plan(s).

Rescue and Evacuation Practices

Appropriate rescue and evacuation practices should be held.

Advice to Personnel

All personnel should be advised of the appropriate clothing and safety equipment required on location, including the provision for emergency extended stays.

Environmental Protection

The Producer or person with delegated responsibility should ensure that potential contaminants such as paints, thinners, repellents, gasoline, oils and like substances do not pollute land and waterways. All rubbish should be removed from the location.

Night Working

All steps necessary to make a location as safe at night as it is required to be by day should be considered. Additional working/access light and awareness may be necessary, as may be extra heating, clothing such as reflectorized jackets, nourishment and time.

REMOTE LOCATIONS

Expert Advice

Local knowledge and expertise should be sought when planning activities in remote locations and competent guides used where appropriate.

Expert Assistance

In more extreme conditions (eg snow, mountains, rivers) competent guides should be on location.

Sources of Advice and Assistance

See Appendix A for sources of advice and assistance.

Notification to Authorities

Local police and emergency authorities should be advised when personnel are operating in remote locations. Information provided should include precise location and expected duration of stay.

Communications

Reliable 2-way communication should be available at all times.

Food and Water Supplies

Adequate food and water supplies should be available to meet the needs of an extended stay. Local water supplies might not be safe for drinking and a portable water supply should be available.

Time to Remove All Personnel

Sufficient time should be allowed to remove all personnel from location if there is not safe shelter for an emergency extended stay. NOTE: Most helicopters are not licensed for night flying and/or may not be able to operate in deteriorating weather conditions.

First Aid/CPR

It is advisable that at least one member of the crew is competent at first aid and CPR. See Appendix B.

STUDIOS

Owner/Tenant Relationship

Good communication between owners and tenants is encouraged to ensure that all relevant health and safety matters are attended to.

Evacuation Plan and Emergency Exits

All studios shall have a visibly displayed evacuation plan and clearly marked emergency exits, which shall be kept clear of obstructions at all times.

Fire Wardens

Fire Wardens shall/should be appointed with the responsibility for ensuring that all personnel are evacuated in an emergency. Fire Wardens shall/should be readily identifiable.

Fire Fighting Equipment

Appropriate firefighting equipment shall be provided at clearly labelled positions.

Meal Rooms, Washrooms, Toilets, First Aid Facilities

The provision of meal rooms, wash rooms, toilets, and first aid facilities shall/should conform to the requirements of the Health and Safety in Employment (General Workplace Conditions) Regulations (proposed).

Storage

Defined areas for the storage of equipment, packaging, and personal baggage and belongings should be provided. All access ways should be kept free of obstructions.

PUBLIC PLACES

Consultation with Authorities

Local police and public authorities should be consulted when planning activities in public places, and the necessary permission received. Police permission is required to block off public streets or public rights of way.

Restricted Access

Access should be tightly controlled around potentially dangerous equipment (eg lights, cranes, sets, scaffolding), and public access to the area suitably controlled.

Night Work

Warning signs should be illuminated and clearly visible.

Public Passageways

Public passageways should be kept as tidy and free of obstructions as possible. Where necessary signs should be posted, lookouts posted, or alternative routes organised.

Crowd Control

Provisions should be made to adequately control any crowd which may gather, to assist pedestrians past the location and to restrain or remove trespassers from the location.

SEA AND WATER

Advice to the Producer of Water Competency

All personnel should advise the Producer or person with delegated responsibility of their swimming and water skills.

Consultation with Authorities

The police and any relevant authorities should be consulted when any of the following activities are planned:

- (a) The firing of rockets or other similar distress signals, firearms or explosives.
- (b) Simulations of accidents, disasters etc which might be mistaken for genuine occurrences by the public.

Vessels And Crew

All vessels used should be appropriate for the conditions and crewed by competent and appropriately certificated crew. Equipment should be properly stowed and secured and personnel should move carefully at all times.

Lifesaving Equipment and Rescue Vessels

At all times there should be adequate lifesaving equipment immediately available.

Life jackets should be worn by all personnel in small craft.

A person competent in CPR and rescue in the prevailing water condition, at the location should be present and should be provided with appropriate rescue equipment.

Appropriate rescue vessels and/or equipment should be in position where personnel are exposed to the hazard of water.

In swift water, a person(s) competent in Swift Water Rescue should be in position.

Assessment of Weather Conditions, Tides, Currents

Due regard should be taken of the time of year, month, day and the affect this, with current weather conditions, may have upon water conditions.

Expert local advice and consultation with the persons in charge of vessels and rescue procedures should take place.

Electrocution

Appropriate precautions should be taken with all electrical equipment. The danger of electrocution is greater around water.

Pollution/Contamination

Waterways may be contaminated with organic and/or inorganic material that could cause toxic reactions or infection. Territorial local authorities can advise. Water may be tested and if necessary alternative arrangements for location or action should be taken. In cases where water is contaminated, care should be taken to protect broken skin and prevent accidental drinking of the water.

Post Immersion Facilities

Whenever personnel are required to work in waterways known to be contaminated, post-immersion facilities should be provided immediately on hand and all relevant personnel should be encouraged to use them.

Identification of Hazardous Objects in the Water

Care should be taken to identify potentially hazardous objects in the working area.

Underwater Photography

Refer to the Water Stunts, Underwater Photography section (section 16).

11. MAKE UP AND WARDROBE

HAZARDS

- Burns.
- Chemicals.
- Cuts.
- Electricity.
- Infections.

INTERPRETATIONS

"MSDS" means Material Safety Data Sheet. These provide concise safety and health information about the hazards and safety precautions of the substance and should be available for all products.

GENERAL SAFETY PROCEDURES

Injury to Persons From Instruments and Misapplication of Make Up

Injury to the eyes and face can occur in areas where the floor is unstable (eg in vehicles and caravans), and in restricted work areas:

- (a) The floor should be made stable or as stable as possible.
- (b) Signs should be erected restricting entry and warning of the hazard.
- (c) A barrier to restrict entrance should be placed across the entrance to the make-up and wardrobe area.
- (d) Persons moving in the make-up area should be aware of this hazard.

HAZARDOUS CHEMICALS

Material Safety Data Sheets (MSDS)

Material Safety Data Sheets should be readily available. These sheets contain information on the material, toxicity, safety precautions and emergency treatment.

Storage

All hazardous chemicals shall be stored in appropriate containers and shall be clearly labelled.

Disposal of Chemicals and Containers

The Producer or person with delegated responsibility shall make suitable arrangements for the disposal of used hazardous chemicals, containers, spray cans and the like.

Ventilation

It is important to ensure adequate ventilation when mixing chemicals.

Ensure that adequate ventilation is provided when using coloured sprays, hair sprays, fixer sprays and insect repellent.

Hazardous Substances Section

Refer to the section on hazardous substances (section 9).

FIRE

No Smoking

Areas where chemicals are stored and/or used are strictly No Smoking areas.

Provision of Fire Fighting Equipment

Suitable firefighting equipment shall/should be on hand.

Fabrics and Fire Retardants

Wigs and costume fabrics should be non-synthetic for use in scenes involving fire or naked flames. Retardants should be used whenever practicable. The Costume Designer or person with delegated responsibility should consult with the Stunt Co-ordinator and Special Effects Supervisor prior to designing wardrobe for use in fire sequences.

Fire Hazard

Tongs, irons and similar equipment can create a fire hazard and should be switched off when not in use.

HYGIENE

Preventing the Spread of Infections and Diseases

Infections such as colds and flu and health conditions such as cold sores (herpes), acne (pimples), warts, conjunctivitis, sties, thrush and other mouth infections, hair and scalp afflictions, and hepatitis are present in the general community all the time. HIV/Aids is also a concern. Make up personnel must be aware of this and take appropriate measures to prevent spread from person to person and to themselves. Latex rubber gloves should be worn especially in the presence of blood.

Hygienic Practices

Make up personnel should use disposable cosmetic applicators where there is a risk of spreading infection between people. Adopting single use procedures, in conjunction with sanitising and washing between clients should be encouraged. Brushes, sponges and other applicators when used on numerous clients should be regularly sanitised.

Cleaning and Disinfection

Sanitising and disinfection of brushes and combs should consist of washing in hot water and detergent followed by immersion in a solution of isopropyl alcohol for 15 minutes. Disinfecting solutions can be obtained from hairdresser supply merchants.

Sponges should be washed thoroughly in hot water and detergent, rinsed well, and dried. All make up equipment should be stored in a clean container.

Clients should have individual towels.

All work surfaces should be sanitised once each day.

12. MOTOR VEHICLE

HAZARDS

Being struck by a vehicle.

Crashes between vehicles and with structures and equipment.

Falls from vehicles.

Fatigue.

Fire.

INTERPRETATIONS

"Motor Vehicle" means any powered vehicle or trailer used on or off the road.

"Tracking Vehicle or Insert Camera Car (the vehicle)" means a vehicle that is used for the mounting of cameras and other equipment for the purpose of photography of, or in, a stationary or moving vehicle.

"Action Vehicle" means any moving vehicle being used as part of a film sequence.

DRIVING/TRANSPORT

Holding of Licences

All personnel shall hold the appropriate licence for the vehicle they drive.

Fatigue

Fatigue is a recognised health and safety hazard. The potential for accidents on the road due to fatigue should be noted. The Producer or person with delegated responsibility should consider workloads involving driving.

Safety Checks

The vehicle and any attachment should be safety checked before each job by the driver and the vehicle should have a current Warrant of Fitness or Permit to Operate.

Heavy Transport and Passenger Service Vehicle Driving Limitations

The following limitations apply to drivers of heavy transport including drivers of Heavy Motor Vehicles/ Goods Service Vehicles of more than two axles or greater than 3500 kilos manufacturer's gross laden weight and to drivers of any vehicle carrying more than 10 passengers.

Driving Limitations in Any 24 Hour Period

A driver may not drive for more than 11 hours.

A driver may not drive for more than 5.5 hours continuously, and the minimum break is half an hour.

A driver cannot be at work or be on duty for more than 14 hours. This includes all working and driving time combined, whether paid or unpaid. "On duty" is defined as any time required to carry out the requirements of the job and includes any other paid employment in which a person is engaged.

A driver shall be off-duty for at least 9 hours continuously; ie: from the time a person finishes work at the end of the working day to the time a person starts back at work.

Requirement to Have 24 Hours Off Duty

Any person who drives heavy motor vehicles shall have 24 consecutive hours off duty after the person has:

- (a) Worked or been on duty for a cumulative period of 70 hours: **or**
- (b) Driven for a cumulative period of 66 hours, whichever occurs first. A driver or person required to drive as part of their job, may not work or be "on duty" for more than 70 hours. Working or on duty means driving, loading, unloading or maintenance. Time spent in the cab of a vehicle that is moving is not considered rest or off duty.

NOTE: There are substantial fines and disqualification penalties for abuse of these rules and they may be imposed on both the driver and the employer.

TRACKING VEHICLES

Driver

The person in charge of a Tracking Vehicle (the Vehicle) is known as "the Driver".

Vehicle to Vehicle Shoots

When performing vehicle to vehicle shoots the vehicle should be driven by a driver competent in close moving vehicle driving.

Restricted Access to The Vehicle and Safe Loading

The vehicle should be restricted to essential personnel only and the loading shall be within the safe loading limits of the vehicle.

Public Roads

When filming on or adjacent to a public road where the driving public may be distracted, the Police should be notified. Adequate warning should be given to other traffic of a tracking vehicle operating.

Mounting Equipment on the Vehicle

Equipment mounted on the vehicle shall be firmly attached to the vehicle.

Towing Weight Limitations

The manufacturers limitations on the maximum weight being towed by a vehicle should be complied with.

Safety in Adverse Conditions

Extra consideration should be given to the safety of personnel working on such vehicles in adverse conditions.

Traffic Controller

Where necessary a person(s) should be designated Traffic Controller and be responsible for carrying out temporary public traffic control duties as instructed.

The Traffic Controller should be provided with appropriate safety equipment and clothing.

Communications

The Producer or person with delegated responsibility should ensure that adequate communication with the driver and traffic controller is established before any driving takes place.

Warning of Movement of Vehicles

Warning of the movement of vehicles should be given to all crew and cast members in the immediate vicinity of the vehicles.

Dry Run and Authority to Abort

A "dry run" or "walk through" of any action should be conducted prior to rehearsal or filming with all personnel involved present. An understanding of any intended action, possible deviations and authority to abort, should be made clear to all concerned.

ACTION VEHICLES

Competent Person

Action vehicles should only be used under the control of a competent person.

Vehicles Appropriate for the Task

Any action vehicle, whether independently mobile or not, should be appropriate for the task for which it is to be used.

13. RIGGING

HAZARDS

Access ways blocked by ropes and tackle.

Falls of equipment and personnel.

Heat on synthetic rope and like equipment.

INTERPRETATION

"Rigging" means the use of block and tackle, slings, shackles, ropes and such means for suspending or securing equipment and personnel.

GENERAL SAFETY PROCEDURES

Responsibilities

Any person carrying out rigging work should work in accordance with the Rigging Code of Practice 1989.

Securing of Personnel in Height Risk Situations

A suitable safety harness or similar equipment should be used.

Supervision of Personnel in Height Risk Situations

A competent person should supervise the operation until such time as any persons at risk have been removed from the position.

Rigging Lights

Suitable strength steel wire ropes or welded link chains should be used to support lights or lighting trusses for at least 2 metres above the lights. Heat generated by the lights will soften and melt synthetic ropes, strops or webbing.

Tackle

All tackle including pulleys, shackles and load bearing fittings should be of sufficient safe working load rating for the purposes for which it is being used.

NOTE: Yachting type equipment is generally not acceptable

14. SCAFFOLDING

HAZARDS

- Collapse of the structure.
- Equipment falling from the structure.
- Falls.
- Wind.

INTERPRETATIONS

"Scaffolding" means a structure usually constructed from metal tubing or timber to hold plant, equipment or personnel. The structure is usually used on a temporary basis and may be manually mobile.

GENERAL SAFETY PROCEDURES

Responsibilities

The Producer or person with delegated responsibility should ensure that the scaffolding is used for the purposes for which it was built.

Consultation

The Producer or person with delegated responsibility and the person(s) in charge of the erection and use of the scaffolding, should consult on the adequacy of the scaffolding for a particular sequence or shot. The safe working load of the structure should be known.

Regulatory Requirements

All scaffolding is to be erected in compliance with the Construction Regulations. Construction of scaffolding is defined as "construction work" under these Regulations and any scaffolding higher than 5m shall be "Notified to WorkSafe NZ" and a safety supervisor appointed. Scaffolding higher than 8m shall, in addition, only be erected by a certificated scaffolder. Where scaffolding is to be used to support heavy equipment, special conditions will apply to its construction and regardless of height, should be designed by a Registered Engineer. All scaffolds, platforms etc should have a notice advising Safe Working Load which should not be exceeded.

Safety Rail

Safety rails should be fitted to prevent falls. Scaffolding higher than 3m shall have a safety mid-rail.

Access

Ladders should be fixed in place and only ladders should be used for climbing.

Ferrying and Securing Equipment

Equipment being ferried up and down should be properly secured and belayed. Equipment on top should be secured to the main framework or body of the tower.

Movement of Mobile Scaffolding

Personnel shall leave the scaffolding when it is being moved.

The Effects of Wind on Scaffolding Structures

Hanging large areas of material (eg. black drapes, tarps, silks) from a tower or elevating device on an exterior location creates wind resistance and may cause the structure to become unstable. People, equipment and materials may have to be removed from the structure.

Minimum Clearance from Overhead Live Electric Power Lines

The scaffolding shall have a minimum clearance of 4m from overhead live electric power lines. Consult the local power suppliers for lesser clearances. Refer to the Electrical section (section 6).

15. SPECIAL EFFECTS

HAZARDS

Chemicals and fumes.

Concussion from firearms.

Explosion including radio triggered explosion.

Fire.

Flash Burns.

Light Flashes.

INTERPRETATIONS

"Mechanical Special Effects" means ways of creating special effects by the use of but not limited to the use of steam, fog, rain, water and wave effects, wind, snow, air mortar explosions, breakaways, falling objects, action props, flying sequences, artificial smoke and mists, chemicals.

"Pyrotechnic Special Effects" means ways of creating special effects by the use of but not limited to the use of explosives, pyrotechnics, fireworks, bullet hits, flames and pyrotechnic smoke devices. Note that safety flares, parachute rocket flares, and pyrotechnic smoke pots all fall into the category of pyrotechnics when used as special effects.

"Artificial Smoke and Mists" means smoke or mist produced from chemicals or oil for theatrical purposes.

"Open Flames" means the planned use of fire excluding fireplaces, camp and barbecue fires, and candles.

"Special Effects Supervisor" means the person responsible for the planning, preparation and use of special effects.

"Special Effects Technician" means a person responsible for the preparation and use of special effects under the supervision of a Special Effects Supervisor.

GENERAL SAFETY PROCEDURES

Competent Person

Only a competent person, a Special Effects Supervisor or Special Effects Technician, may carry out Mechanical or Pyrotechnic Special Effects.

A regulatory decision has been made that all persons involved in the use of explosives for Special Effects in the film and video production industry will be required to hold a Certificate of Competency under the Explosives Act and Regulations. The detail of such a Certificate is currently being finalised, but it is expected to be in force by 1996. Experience

in the use of explosives in quarry operations or in the military, does not necessarily mean that a person is competent to handle explosives special effects on a film location.

Special Effects Supervisor

All Special Effects involving the use of explosives including body bullet hits, pyrotechnics, open flames and artificial smoke should only be carried out by the Special Effects Supervisor and designated Special Effects Technicians.

Consultation

The Producer or person with the delegated responsibility and the Special Effects Supervisor should consult on the special effects planned and the safety requirements and procedures.

Notification of Planned Use

Notification to the appropriate Authorities of the planned use of explosives and pyrotechnics or open flames shall be made as required in the relevant Regulations or local By-laws.

Notification to Personnel

The Producer or person with delegated responsibility should communicate to all personnel that explosives and pyrotechnics, open flame/fire sequences or smoke producing equipment will be used. Appropriate information on safety matters should be included.

Emergency Plan

An emergency plan should be prepared by the Special Effects Supervisor and/ or the person with delegated responsibility and approved by the Producer. The plan should include acceptable avenues of escape.

Individual Responsibility for Escape Routes

Each person shall check the escape route in order to assure that it is, and will remain accessible. Any person who is unsure of the designated escape route should check with the First Assistant Director and learn the escape route before entering the work area.

Safety Briefing and Walk Through

Before any potentially hazardous sequence is to be performed, an on site meeting should be called, for all personnel directly involved where an explosion, hazardous or open flame sequence is to take place. The meeting should include an "on-site walk through" or "dry run" with the Special Effects Supervisor and all personnel directly involved in the event.

The Special Effects Supervisor should clearly identify:

- (a) The intended action,
- (b) Possible deviations,

- (c) Communication signals and chain of command,
- (d) Authority to abort event,
- (e) Acceptable avenues of escape,
- (f) Location of necessary safety equipment and personnel.

Substantial Changes to the Planned Special Effect

If at any time, substantial changes become necessary, another meeting should be called to confirm everyone's understanding of and agreement to the change(s).

Live Rehearsal

A live rehearsal should be held whenever practicable.

Emergency Vehicle Access

The Producer or person with delegated responsibility and the Special Effects Supervisor shall ensure that there is a clear access for emergency and fire fighting equipment and vehicles.

Affect of Special Effects on Studios/Buildings

When planning the use of special effects in a studio/building, expert advice should be sought as to how such effects might affect or be affected by the studio/building itself.

Fire Fighting Equipment

The Producer or person with delegated responsibility shall be responsible for the provision of sufficient fire fighting equipment and ensure that the appropriate equipment is immediately available on set.

Water Effects

All water used in rain sequences where the water falls on cast and/or crew should not pose a health risk.

EXPLOSIVES AND PYROTECHNICS

Restrictions on Use and Carriage

The authorities controlling the use of explosives are the Inspectors of Explosives of WorkSafe NZ of the Department of Labour. They administer the statutory regulations on the use of, transportation, importation, storage and also of explosives. They issue appropriate permits:

- (a) Special effects supervisors conducting pyrotechnic sequences which fall into the category of a fireworks display, shall have a "permit to stage a fireworks display".
- (b) WorkSafe NZ should be notified before significant pyrotechnic sequences are held.
- (c) Carriage of Fireworks:

- a. There are restrictions on the carriage of explosives by sea and air. The relevant carrier should be contacted well in advance to determine applicable conditions.
- b. On land, the carriage of explosives is subject to the Explosives Regulations 1957, the Transport Act 1962, its Regulation and Amendments and the NZS 5433, the Code of Practice for the Transport of Hazardous Substances on Land.

The Explosives Area

The Producer or person with delegated responsibility and the Special Effects Supervisor should determine the "explosives area", and identify the special effects vehicles.

Restricted Access to the Explosives Area

Only crew and cast members necessary for the purpose of filming should be in the explosives area.

Detonation of Explosives

Detonation of explosives should be by manual or battery powered systems designed for the purpose.

Entry to the Explosives Area After Each Take

After each take, the first person to go into the explosives area shall be the Special Effects Supervisor. When the Special Effects Supervisor deems it safe to do so, others may enter.

Unintended Detonation of Explosives By Radio Transmissions and Mobile Phones

Radio transmissions of any kind, including mobile phones, shall be turned off in the explosives area unless exempted by the Special Effects Supervisor. This restriction applies from the start of the preparation of pyrotechnics until after the explosives area has been cleared by the Special Effects Supervisor.

Thunder and Lightning

In the event of audible thunder or visual sighting of lightning, all explosive work shall be suspended and made safe.

No Smoking

No person shall smoke or bring or permit any fire, spark or other source of ignition to be brought into the vicinity of any explosives.

Bullet Hits

Use only custom made bullet hits designed for use in the close vicinity of crew and cast members.

Rigging Body Bullet Hits

Only the Special Effects Supervisor or Special Effects Technicians should rig body hits.

OPEN FLAMES

Restriction on Installation of LPG

Where the cylinder capacity is greater than 15 kg, a registered gas fitter is required to install lines and appliances unless an exemption has been obtained.

Flammables and Combustibles:

Shall be kept a safe distance from open flames.

Shall always be kept in approved containers.

When used on set to act as a fire accelerant, continual ventilation should/ shall be initiated until ignition or clean up and storage is completed.

When LPG is used to provide a yellow flame, carbon monoxide is produced. Adequate ventilation shall be maintained.

Each propane tank "shut-off" location should have an operator who has a clear view of propane fires at all times.

All gas lines in connection with the use of open flames, shall be in accordance with applicable building, fire and gas codes.

All stationary open flame fixtures shall be firmly secured.

The fuel source for special effects fire rigs shall be sufficiently isolated/bunkered/distanced from the remainder of the crew so as to avoid any risk to personnel in the event of a flash back. The use of flash back arresters is advised.

On an interior set when smoke and open flame are used together, great care shall be taken that the smoke does not reach a level of density where it could ignite from the open flame.

Fire Area

The Producer or person with delegated responsibility and the Special Effects Supervisor should determine the fire area. Only essential personnel should enter the fire area.

Fire and Provision of Respirators

When creating a fire, the operator should exercise all reasonable precautions to prevent heat and smoke inhalation and should make respirators available on request. Such respirators should be appropriate for the type of smoke.

ARTIFICIAL SMOKE AND MISTS

Bronchial Sufferers

All personnel should be warned of the risk to sufferers of bronchial disorders of sensitivity to artificial smoke and mists and the resultant effects. Bronchial sufferers shall/should be provided with appropriate respiratory equipment if required to be in the vicinity the effect.

Type of Chemical

- (a) The type selected should cause the least respiratory irritation; and
- (b) be safe to use.

NOTE that dense artificial smoke can be highly flammable. Special care should be taken to prevent ignition from any source. An MSDS sheet for each substance used should be immediately at hand.

Exposure to Artificial Smoke and Mists

Exposure to artificial smoke and mists should be kept to a minimum.

Ventilation

When utilising smoke on an interior set on location, the creator(s) shall provide a means to exhaust or ventilate the set.

When smoke and/or mist is created on an interior set, the stage should be periodically ventilated or exhausted, vertically or laterally. All personnel and animals should be given a break away from the stage at appropriate intervals.

Provision of Protective Respiratory Equipment

The Producer or person with delegated responsibility shall/should provide specialised respiratory equipment where personnel are required to be exposed to long or intense periods of artificial smoke or mist.

Evacuation of Crew and Cast Rooms

When artificial smoke and/or mist is used on any interior set, all non-essential personnel should be removed from all crew and cast rooms located on or close enough to be affected by the smoke or mist.

Emergency References

Should any emergency occur involving hazardous substances advice may be obtained from: -

National Poisons and Hazardous Chemicals Information Centre
PO Box 913, Dunedin Tel (03) 479 7248 Fax (03) 477 0509

Or alternatively the local branch of the Occupational Safety and Health Service of the Department of Labour. (*see Appendix B*).

MECHANICAL EFFECTS

Wind and Rain Near Electrics

Only a competent person, Special Effects Supervisor or Special Effects Technician should carry out Wind, rain or water effects in the vicinity of on-set lighting or other electrical cabling or devices.

Breakaways

When constructing breakaways, a competent person, Special Effects Supervisor or Special Effects Technician should be consulted. (Refer also to Art Department and Set Construction, section 8).

Chemical Effects

When creating chemical special effects, including the use of liquids and gels for fire effects, those involved shall be familiar with the chemical used, the chemical result, and the potential effects on the health of cast and crew. (Refer also to Hazardous Substances, section 9).

16. STUNTS

HAZARDS

Due to the scope of this section, potential hazards are too numerous to list, but generally include:

Aerial hazards.

Injury to immediate crew.

Miscalculation of effects.

Personal injury to Stunt Performer(s).

Public involvement.

Water hazards.

INTERPRETATIONS

"Aerial Co-ordinator" means a person appointed to control the movements of people and equipment in the air and supporting the aerial activity. "Burn, Full" means:

- 1) When a substantial part of the body is on fire and when the flames reach or interact with the head area and could limit the sight or breathing of the Stunt Performer.
- 2) Any fire gag where a breathing apparatus or eye protection is required.
 - a. "Burn, Partial" means when a stunt performer carries an amount of fire limited to a restricted area of the body (ie. an arm, a leg, a portion of the torso) and does not inhibit the sight or breathing of the stunt performer. "Certificated Parachutist" means a person holding a current and valid certification card issued by the New Zealand Parachute Federation (NZPF) or equivalent organisation.

"Certified Diver" means a person holding a current and valid certificate issued by the National Association of Underwater Instructors (NAUI) or the Professional Association of Diving Instructors (PADI) or equivalent organisation and should be medically fit to dive.

"Drop Zone Safety Officer" means a person suitably competent to control the persons, movements, equipment and activities in a Drop Zone. "Safety Person" means any person designated by the Stunt Co-ordinator to be responsible for certain safety aspects/procedures associated with a stunt.

"Safety Spotter" means a person appointed by the Stunt Co-ordinator to observe an "at-risk" scene and assist in controlling risks.

"Scuba Dive Co-ordinator" means a person suitably qualified and skilled to arrange, set up and oversee the production of any underwater scenes or stunts.

"Skydive Co-ordinator" means a person suitably qualified and skilled to oversee and ensure the safe production of a skydive.

"Stunt" means the execution of a hazardous performance/sequence under controlled conditions.

"Stunt Co-ordinator" means a person suitably qualified and skilled to arrange, set up and oversee the production of any given stunt. In practice this person may also be a Stunt Person.

"Stunt Person" means a person suitably qualified and skilled in the techniques appropriate to carry out the stunt required.

GENERAL SAFETY PROCEDURES

Public Participation

No member of the public may actively participate in a stunt or be put at risk of injury by the performance of a stunt.

Communication of Risk

No performer or extra shall/ should be asked to perform a stunt without being fully informed of the risks involved.

Knowledge and Skills

Although Stunt Performers are responsible for taking measures to ensure their own safety, the Producer or person delegated with responsibility should ensure as far as is reasonably practicable, that the stunt artists have the necessary knowledge and skill to carry out the stunt with the minimum of risk.

Determination

The Stunt Co-ordinator in consultation with the Producer or person with delegated responsibility should determine what specialist personnel and equipment are necessary for a particular stunt scene.

Consultation

The Stunt Co-ordinator, High Fall Co-ordinator, Skydive Co-ordinator, Scuba Diver Co-ordinator as appropriate, and the Producer or person with delegated responsibility should consult on the safety requirements for a particular sequence or shot.

Weather and Other Conditions

The Stunt Co-ordinator in conjunction with the Producer or person with delegated responsibility, should determine if weather and other conditions are suitable for carrying out any particular stunt.

Medical Support

The Stunt Co-ordinator, in consultation with the Producer or person with delegated responsibility, should determine what type of medical support is needed for any particular stunt. Generally two trained medical providers and a properly equipped vehicle should be immediately on hand.

Fire Fighting Equipment

The Stunt Co-ordinator in consultation with the Producer or person with delegated responsibility should determine what type of fire fighting equipment is to be provided and immediately available.

Time Schedule

It is the responsibility of the Producer or person with delegated responsibility, in consultation with the Stunt Co-ordinator, to ensure that adequate time is scheduled for the set-up, walk through, rehearsal and execution of any stunt. Adequate time should also be given to allow the performer/stunt person to familiarise themselves with any equipment, vehicles, animals etc involved in the sequence.

Notification

All personnel should be adequately informed in advance that a stunt is to be performed. Appropriate information on safety matters should be included.

ON SITE PROCEDURES

On-site Walk Through, Dry Run

Before any stunt is executed, an on-site meeting shall/should be called to specify the intended sequence. The meeting should include an "on-site walk through" or "dry-run" with the Stunt Co-ordinator and all personnel directly involved in the event.

The Stunt Co-ordinator shall/should clearly identify:

- (a) The intended action,
- (b) Possible deviations,
- (c) Communication signals and chain of command,
- (d) Authority to abort the event,
- (e) Acceptable avenues of escape,
- (f) Location of necessary safety equipment and personnel,

NOTE: It is recognised that it is not always possible to do a "dry-run" of a stunt. For instance, in most cases there is no value in executing a stunt at slow speed, as the result will not be the same as at full pace.

Changes to Plans

Changes to the planned procedure shall/should be considered/arranged with the appointed expert. The safety implications of any such change shall/should be carefully

thought through, and all changes shall/should be notified to relevant personnel. In the event of substantial changes to the intended procedure, a second briefing and/or "dry run" shall/should take place.

Camera Positioning

The Stunt Co-ordinator, in consultation with the Producer or persons with delegated responsibility including the Camera Department, shall/should determine the safe positioning of both manned and lock off cameras. Changes to such positions require consultation between all the parties.

Protection of the Camera and Camera Crew

The Stunt Co-ordinator and the Camera Department shall/should determine any protection necessary for the camera and crew and ensure that such protection is used.

Tiredness

An activity can become much more dangerous when the participants are tired. The willingness and fitness of artists and contributors to continue with the production should be continuously monitored. The temptation to go for "just one more take" should be resisted.

Actors In Harnesses

Any actors placed in harnesses for aerial-wire/blue screen shots should be supervised at all times by a suitably qualified and skilled Safety Person. All equipment used should be thoroughly checked in advance to ensure its fitness for the job.

BURNS

Protective Equipment

Any stunt personnel directly involved with interior fire sets should wear protective fire equipment (ie Nomex suits).

All wardrobe to be used in any type of bum should be treated with approved fire retardant or be of a high cotton or wool fabric content.

Appropriate fire retardant covers should be provided for the camera and crew where applicable.

Water gel should be used at all times on all exposed areas of skin, including the performer's hair if uncovered.

A performer's should have the option of wearing a natural hair wig.

Fire Safety Persons

If the stunt is a "partial bum" there should be no fewer than two safety people skilled in fire suppression, each equipped with suitable fire extinguishers.

If the stunt is a "full bum", there should be no fewer than three safety people, each equipped with suitable fire extinguishers.

HIGH FALL

Interpretation

A High Fall is any fall that requires a specialised fall/arrest system for the safe deceleration of the stunt performer.

Determination

The Stunt Co-ordinator in consultation with the Producer or person with delegated responsibility should determine whether a high fall is necessary for a particular scene, ie a Stunt Performer is needed rather than a dummy.

High Fall Co-ordinator

Once a determination is made, a suitably qualified/competent High Fall Co-ordinator should be appointed.

Choice and Safety of Equipment

The High Fall Co-ordinator in conjunction with the Producer or person with delegated responsibility should determine whether boxes, an air bag, descender or decelerator or similar equipment are to be used to cushion the Stunt Performers fall. The High Fall Co-ordinator and Stunt Performer should both ensure and be satisfied that the mechanics and devices are suitable for safe landings.

Placement of Objects

The Stunt Co-ordinator should have the final say as to the placement of objects around the landing area.

Safety Spotters

There should be no less than two safety spotters for any fall over 5m.

STUNT VEHICLES

Safety Equipment

The Stunt Co-ordinator should determine what safety equipment should be required in or on the stunt vehicle, eg safety harnesses, roll cage, auxiliary petrol tank. In general, any vehicle involved in a collision of any kind should be equipped with 4 or 5 point harnesses for both driver and passenger(s).

Nominated Safety Person

There should be at least one Safety Person nominated by the Stunt Performer to make sure he/she is correctly belted in, as required.

Final All Clear

The Safety Person should give the final all clear when the Stunt Performer is ready and all personnel are in their designated safe areas.

SKY DIVING

Pilot

The pilot shall be suitably qualified for skydiving.

NZ Parachute Federation Requirements (NZPF)

The NZPF shall be contacted to determine the type of authorisation or certification required for the planned skydive(s). All requirement shall be provided in writing.

Skydive Co-ordinator

When the above information is obtained, a Skydive Co-ordinator shall be named. The Skydive Co-ordinator shall have an endorsement or certification equal to or greater than that of the parachutist. The Skydive Co-ordinator shall be approved by, or be, a Chief Safety Officer (CSO). The CSO is a person authorised by the NZPF to supervise parachuting operations.

Responsibility

The Skydive Co-ordinator is responsible for the safety of the skydive. Factors such as location, weather, communication and security are his/her responsibility to consider.

Consultation

The Civil Aviation Authority may need to be consulted when multiple aircraft and/or skydivers are involved. Advice should be taken from the Chief Pilot.

Equipment Safety Evaluation and Approval

All equipment, props, wardrobe and like things, shall be made available to the Skydive Co-ordinator prior to the skydive for safety evaluation. Final safety approval rests with the Skydive Co-ordinator with respect to equipment and wardrobe used in the jump. Any variation from the NZPF regulations requires NZPF approval or a Civil Aviation Authority (CAA) dispensation given in writing. All CSOs should have a copy of the appropriate regulatory requirements.

Drop Zone Safety Officer.

All jumps made in New Zealand shall have a qualified Drop Zone Safety Officer on the ground.

Scuba Diver Co-ordinator

A Scuba Diver Co-ordinator should be named. The Scuba Diver Co-ordinator should have an endorsement or certification equal to or greater than that of the scuba diver(s). The Scuba Diver Co-ordinator should be qualified to at least certificated Rescue Diver.

Medical Approval and Diving Competence Of Crew And Cast Members

All crew and cast members required to use underwater equipment on a production should be previously examined and authorised by an approved medical authority and be trained to a level of competence as determined by the Scuba Diver Co-ordinator.

Qualification to Use Scuba Equipment

- (a) Any person using Scuba equipment while filming or being filmed should be a Certificated Diver, excepting cast members where they are essential for an underwater close-up.
- (b) Exception For Cast Members – when this exception arises, the cast member(s) should be under the direct supervision of a Scuba Instructor holding a current certificate and should receive sufficient instructions for the job at hand. The appropriate depth for safe filming should be determined by the Instructor. Cast members who are not certificated divers should be limited to a maximum depth of 3.3m.

Buddy Divers

A buddy diver should be used on all occasions. All buddy divers should be equipped with an "octopus" type spare regulator.

Construction Legislation - Application When Diving

The requirements of the Construction legislation shall be met when underwater construction work is being carried out such as welding, use of explosives, erection and/or use of temporary structure.

Open Water and Safety Boats

When working in open water (ocean, rivers, lakes away from shore), for every 4 underwater crew and cast members a safety/diving boat of at least 3.3m in length, preferably of an inflatable type, should be standing by. Additionally each safety boat should contain at least two qualified water safety personnel, at least one of whom should be qualified as a certified rescue diver. The boats should be flying the internationally recognised "Diver Below" flag.

Vehicle Jumping

In any stunt where an occupied vehicle is jumping into or above water more than 12m from the shoreline or into a depth of water greater than 1.5m, a safety pick up boat should be in the water with no less than three safety divers aboard.

General Water and Boat Safety

Refer to Locations (section 10) – Sea and Water section for more information.

Care of Scuba Tanks

Scuba tanks should be secured to prevent them from moving and to ensure the valves are protected when being transported, including to and from the location.

When not in use, Scuba tanks should be equipped with valve covers and stored in the shade.

Ship to Shore Communications

Ship to shore communications should be maintained at all times.

Propeller Hazards

Propeller hazards should be considered at all times.

Underwater Traps

Any person performing a stunt where the possibility of being trapped underwater exists, should have standby breathing equipment immediately available as well as being accompanied by a buddy diver.

Diving Below 10m

If divers are required to work at depths greater than 10m for extended periods the following should apply:

- (a) The Producer or person with delegated responsibility should determine the nearest location of a re-compression chamber and the planned emergency transportation to that chamber. The information should be suitably notified in advance to all personnel.
- (b) An emergency recall-to-the-surface system should be in operation.
- (c) Transport to the re-compression chamber should be immediately available.

Submerged Vehicles

Any vehicle entering the water during a stunt and staying submerged should be driven by a certificated diver and be carrying extra breathing apparatus. A certificated rescue diver should be in position immediately on hand.

Escape Hatch. An escape hatch should be built into any vehicle used in a stunt where the vehicle will enter the water, and possibly stay submerged, at any depth.

Removal Of Vehicles. Any vehicle or other similar object placed in the water shall be removed once filming is completed.

Electrical Safety

Refer to Electrical (section 6) regarding the safe use of power on and around water

APPENDIX A

REMOTE LOCATIONS - SOURCES OF ADVICE, INFORMATION AND ASSISTANCE

Reference: NZ Mountain Safety Council, Outdoor Kitset, Module 1, Resources.

Detailed information on the resources of the organisation and its members is contained in this publication.

- Department of Conservation
- Federated Mountain Clubs of NZ Inc
- Meteorological Service of New Zealand Limited Ministry of Defence (Army)
- Ministry of Forestry
- Mountain Radio Service
- NZ Canoe Association
- NZ Deerstalkers Association
- NZ Mountain Safety Council and its Branches NZ Orienteering Federation
- NZ Outdoor Instructors Association
- NZ Police
- NZ Ski Council Inc
- NZ Ski Instructors' Alliance
- NZ Speleological Society
- NZ Underwater Association
- NZ Water Safety Council
- Adventure Tour Operators
- Alpine Guides Mt Cook Limited
- Alpine Guides Westland Limited
- Alpine Recreation Canterbury Limited
- Mountain Recreation School of Mountaineering Outdoor Education Centres
- Outdoor Recreation Commercial Operators (Nationwide)
- Rental Agencies for skiing and tramping equipment

APPENDIX B

FIRST AID REGULATIONS AND FIRST AID KIT – the requirements of the Factories and Commercial Premises (First Aid) Regulations 1985 (SR 1985/108) shall be used as a guide. Minimum scales for the contents of the first aid kit from this Regulation are listed as below (as at 06 November 2008). The location and type of activities where the first aid kit is to be used should be considered when making up a kit and appropriate items and numbers of items included.

MINIMUM SCALES OF FIRST-AID APPLIANCES AND REQUISITES

	Number of Persons Usually Engaged at Any One Time						
	< 5	6-25	26-50	51-75	76-100	101-250	251 or more
Factories	< 5	6-25	26-50	51-75	76-100	101-250	251 or more
Other Under-takings	< 25	26-50	—				
Triangular bandages	2	2	2	4	4	6	6
Roller bandages (including crepe bandages-50mm and 75mm sizes)	3	5	7	9	12	16	24
Sterile dressings (75mm X 75mm packets)	2	5	5	10	10	15	15
Adhesive wound dressing strip (100mm packets)	1	1	2	2	3	3	5
Waterproof adhesive plaster (50mm wide reels)	1	1	1	1	1	2	2
Sterile, non-adhesive pads (100mm X100mm packets)	5	5	5	5	10	10	10
Sterile eye pads	1	2	2	4	4	6	6

	Number of Persons Usually Engaged at Any One Time						
Container for use in pouring water over the eye (eg, plastic squeeze bottle)	1	1	1	1	1	1	1
Receptacle for soiled dressings (eg, bucket with foot operated lid)	-	-	-	1	1	1	1
Antiseptic liquid approved by the Medical Officer of Health	125ml	2×125 ml	2×250 ml	2×250 ml	2×250 ml	4×250 ml	4×250 ml
Safety pins	1 card	1 card	1 card	1 card	1 box	1 box	1 box
Scissors (surgical or equivalent-stainless steel)	1 pair	1 pair	1 pair	1 pair	1 pair	2 pairs	2 pairs
Splinter forceps, fine point (stainless steel)	1	1	1	1	1	1	1
Accident register and pen or pencil	1	1	1	1	1	1	1
First-aid booklet (issued by the Departments of Labour and Health or Red Cross/St John)	1	1	1	1	1	1	1
Card listing local emergency numbers	1	1	1	1	1	1	1
Disposable gloves (large size or multi-fitting)	2 pairs	4 pairs	4 pairs	8 pairs	8 pairs	12 pairs	12 pairs

This Schedule has been amended by regulation 4 Factories and Commercial Premises (First Aid) Regulations 1985, Amendment No 1 (SR 1991/42) by substituting the words "Sterile, non-adhesive pads" for the words "Paraffin gauze", omitting the item relating to antiseptic cream, and inserting the item "Disposable gloves (large size or multi-fitting)