Northern Ireland
Fire & Rescue Service

STANDARD OPERATING PROCEDURE NO 14

Electricity

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VERSION CONTROL

This document and subsequent amendments will be issued by the Emergency Response Department, Northern Ireland Fire & Rescue Service (NIFRS) Headquarters.

Amendments are as detailed below:

No	Issued	Amendment	Initiated by	Approved by
1	05/12/2002	Initial Issue of Standard Operating Procedure (SOP)	Divisional Officer (DO) Kerr (Operations Policy)	DO Kerr
2	22/08/2014	Review of SOP - consultation	Group Commander (GC) (Emergency Response (ER))	Assistant Chief Fire Officer (ACO) Ashford
3	19/11/2014	Issue of SOP following approval	GC (ER)	ACO Ashford

1 INTRODUCTION

1.1 Scope

This SOP has been developed to contribute to a safe system of work for incidents involving electrical installations. It shall assist all operational personnel in the decision making process by providing information on:

- significant hazards;
- control measures;
- actions to be considered.

This shall aid Incident Commanders (ICs) in the identification of significant hazards that are present on the incident ground so that a full Dynamic Risk Assessment (DRA) may be carried out, leading to the development of an effective Tactical Plan to ensure a safe and effective resolution of the incident. Incidents involving electrical installations may include one or a combination of the following hazard types:

- Anaerobic Digester (also see SOP 7 - Farms and Agricultural Land).
- Attendance times for resources.
- British Telecom fibre cabinets.
- Explosion in sub-station.
- Combined heat and power plant.
- Contamination.
- Electrical equipment/signs.
- Environmental risk due to run-off from firefighting.
- Fallen power lines, poles or structures.
- Fire in electrical supply network.
- Hazardous materials.
- Hybrid vehicles.
- Hybrid vehicle charging points.
- Non-Fire & Rescue Service personnel involved in the incident.
- Photovoltaic panel systems.
- Rescues from the electrical supply network.
- Street furniture (Northern Ireland Electricity (NIE), Department for Regional Development (DRD) and privately owned).
- Underground electrical fires.
- Vehicles in contact with power lines.
- Wind turbine generation/installations.
- Working at Height (WAH).

This list is not exhaustive.

Definitions

- Low voltage - a voltage not exceeding 1,000 volts.
- High voltage - a voltage exceeding 1,000 volts.
- Plant/apparatus - all equipment forming part of a network in which electrical conductors are used.

1.2 Pre-determined Attendance (PDA)

Incident Type	PDA
Anaerobic Digester	▪ 2 Pumps; ▪ Hazmat attributed vehicle; ▪ Hazmat Officer; ▪ Nearest Flexi Duty System (FDS) Officer.
Hazardous materials confirmed at an electrical incident	▪ 2 Pumps; ▪ 1 Hazmat appliance; ▪ 1 Hazmat Officer; ▪ Nearest FDS Officer.
Hybrid vehicle charging points	▪ 2 Pumps; ▪ Nearest FDS Officer.
Rescues from transmission/distribution systems	▪ 1 Pump; ▪ 1 Rescue vehicle; ▪ Nearest FDS Officer.
Road Traffic Collision (RTC)/fire involving electrical street furniture	▪ 1 Pump; ▪ 1 Rescue vehicle; ▪ A total of 11 riders; ▪ Nearest FDS Officer.
Photovoltaic panel systems	▪ A minimum of 2 Pumps; ▪ Nearest FDS Officer.
Underground electrical fires	▪ 2 Pumps; ▪ 1 Hazmat appliance; ▪ 1 Hazmat Officer; ▪ Nearest FDS Officer.
Vehicles in contact with power lines	▪ 2 Pumps; ▪ Nearest FDS Officer.
Wind turbine generators/ installations	▪ A minimum of 2 Pumps; ▪ Specialist Rescue Team (SRT) Level 1 response to a turbine on fire; ▪ Nearest FDS Officer.

2 SIGNIFICANT HAZARDS AND CONTROL MEASURES

Significant Hazards	Control Measures
Anaerobic Digester (AD) ▪ Biogas storage tanks; ▪ Methane – flammable gas; ▪ Hydrogen Sulphide – toxic gas; ▪ Electricity risk – cables from generator to electric grid; ▪ Drowning risk from waste lagoon; ▪ Entrapment.	▪ Establish an Inner Cordon. ▪ Use defensive tactics where fire but no life risk is involved – ground monitor. ▪ Use Breathing Apparatus (BA) in the Hazardous Area until a gas monitor confirms the area is safe – constant monitoring. ▪ Consult with a Hazmat Officer for a risk assessment. ▪ Mobilise the SRT for entrapment rescues (Level 2). ▪ Confirm from owner if: - biogas is stored in external tanks; - AD generator feeds into electric grid. ▪ Instruct site owner to operate safety flare to burn off any gas within the AD. ▪ Isolate power supply to generator. ▪ Gain information from the site owner on maximum output (in kW) of digester. ▪ Contain any run-off from fire. ▪ Use WAH kit where required.
Attendance times for resources ▪ Increased attendance times for resources in rural locations; ▪ Flexi Officer and/or Hazmat Officer not yet in attendance.	▪ Consult PDA. ▪ Early resource evaluation. ▪ Confirm estimated time of arrival of on-coming resources with the Regional Control Centre (RCC). ▪ IC to gather all Risk Critical Information about the incident to assist in identifying significant hazards. ▪ Send “assistance message” to make up for further resources where required. ▪ Contact the RCC to request talk-through to Flexi Officer or Hazmat Officer for advice.
Telecom utility fibre cabinets - BT, Virgin, etc ▪ Death or serious injury due to electric shock from low voltage electrical supply	▪ Ensure personnel are aware of the dangers. ▪ Ensure appropriate cordons are in place. ▪ Do not approach or make contact with any part of the cabinet. ▪ Request attendance of a telecommunications engineer. ▪ Request attendance of a NIE representative. ▪ Confirm from a responsible person what the voltage levels in the system are.

Significant Hazards	Control Measures
Combined Heat and Power (CHP) Plant ▪ Electrocution hazard from high voltage equipment; ▪ Fall from height; ▪ Fire; ▪ Steam injuries; ▪ Arching.	▪ Ensure personnel are wearing correct Personal Protective Equipment (PPE) at all times. ▪ Ensure the use of minimum crews to effect rescue. ▪ Confirm from a responsible person what the voltage levels are in the system and record in the Incident Log name and levels. ▪ Use WAH kit, if required. ▪ If voltage is less than 1,000 volts and not yet isolated, then attempt a rescue with electrical gloves or other insulated material. ▪ If voltage is more than 1,000 volts and the system is undamaged, maintain a distance of 5 m until isolated. ▪ If damaged, maintain a minimum distance of 10 m until the system is isolated. ▪ If transformer equipment is involved, maintain a distance of 30 m (explosion risk from transformer). ▪ Liaise with CHP Plant representative. ▪ Isolate power if possible. ▪ Consider requesting the SRT for a specialist rescue.
Contamination	▪ Prevent contamination of personnel/equipment. ▪ Provision of appropriate method of decontamination. ▪ Use of decontamination equipment and procedures. ▪ The IC is to liaise with a Hazmat Officer to determine the decontamination required. ▪ IC should ensure that a Decontamination Zone is established if required. ▪ Fire kit must be decontaminated as per Hazmat Officer's instructions.
Crews self-deploying	▪ Full briefing to crews on actions required. ▪ Appropriate level of BA. ▪ Adequate supervision of NIFRS and non-NIFRS personnel within the Inner Cordon. ▪ Instigate appropriate level of the Incident Command System. ▪ Establish a Control Point. ▪ Sectorise and delegate duties to Functional Officers. ▪ Crew members to comply with brief and inform the IC of progress.

Significant Hazards	Control Measures
Electrical equipment/luminous discharge tubes/neon signs ▪ Electrocution hazard from high voltage equipment; ▪ Injury due to inhalation of leaking mercury vapour from damaged tubes.	▪ Ensure personnel maintain a safe distance until the power has been isolated. ▪ Switch “Fire Switch” to “off” position to isolate power (push up to turn off). ▪ Wear BA if tubes/signs are damaged or on fire.
Environmental risk due to run-off from firefighting	▪ The IC must identify any nearby open water sources that may be affected. ▪ Consider mobilising Level 2 and/or 3 pollution resources. ▪ Inform Northern Ireland Environment Agency, if necessary. ▪ Use of Environmental Response kit.
Death or injury due to damaged equipment or fallen power lines, poles or structures ▪ Risk of electrocution; ▪ Arcing; ▪ Fire; ▪ Further collapse.	▪ Ensure personnel are aware of the dangers. ▪ Ensure appropriate cordons are in place. ▪ Do not approach or make contact with any part of the equipment. ▪ Request attendance of a NIE representative. ▪ Maintain a minimum distance of 10 m until the system is isolated and earthed. ▪ If using an Aerial appliance, maintain a distance of 10 m from the Overhead Line (OL). ▪ If using jets, maintain a distance of 20 m from the OL. ▪ If using a ground monitor, maintain a distance of 30 m from the OL.

Significant Hazards	Control Measures
Fires in electrical supply network/sub-stations/pole mounted transformers ▪ Risk of electrocution; ▪ Risk of explosion of mineral oils in sub-stations; ▪ Production of Hydrogen or Acetylene from mineral oil explosion; ▪ Risk of explosion of porcelain/glass insulators; ▪ Potential of confined space working; ▪ Contamination from insulating materials; ▪ Operation of fixed installations (eg, CO^2); ▪ The presence of pressurised Sulphur Hexafluoride 6 (SF6) within plant/apparatus; ▪ Presence of pressurised vessels; ▪ High voltage up to 400,000 volts; ▪ Battery banks; ▪ Uninterruptible power supplies; ▪ Remote control re-energisation or switching on circuits.	▪ Establish an Inner Cordon. ▪ Use defensive tactics where there is fire but no life risk involved, maintaining a safe distance of 30 m – ground monitor. ▪ Avoid hitting porcelain/glass insulators with cold jets, as there is a risk of conductors exploding and travelling some distance. ▪ Use BA in the Hazardous Area until the area is safe – constant monitoring. ▪ Consult a Hazmat Officer for a risk assessment. ▪ Ensure personnel are aware that some sensitive circuits may be “live”, even if the main power switch has been isolated. ▪ Ensure personnel are aware that there could be residual charge left in battery banks. ▪ Request attendance of an NIE representative. ▪ Confirm from a responsible person what the voltage levels in the system are. ▪ Confirm and receive documentation for the electricity to be isolated and earthed (NIE or NIFRS Safety Declaration form). ▪ Always carry long objects horizontally. ▪ If using a ladder or Aerial appliance, maintain a distance of 10 m from the OL. ▪ If dense smoke or flames are approaching conductor, maintain clearance of a 10 m corridor. ▪ If using jets, maintain a distance of 20 m from the OL. ▪ If using a ground monitor, maintain a distance of 30 m from the OL.

Significant Hazards	Control Measures
Death or serious injury due to ▪ Vegetable mineral oil; ▪ Pressurised Sulphur Hexafluoride; ▪ Sulphuric Acid (batteries); ▪ Fixed installations; ▪ Asbestos – very limited; ▪ Polychlorinated Biphenyl (PCBs).	▪ No eating, drinking or smoking inside the Inner Cordon. ▪ A minimum number of personnel in the Hazardous Area. ▪ Strict control of the Inner Cordon. ▪ Use of appropriate PPE. ▪ Use hand-wash on appliances. ▪ Establish an adequate level of decontamination. ▪ Seek medical attention, if necessary. ▪ The IC is to liaise with a Hazmat Officer.
Incidents involving street furniture, to include ▪ NIE; ▪ DRD; ▪ Privately owned, ie, Adshel bus shelters; ▪ Hybrid vehicle charging points; ▪ Low voltage electrical supply; ▪ Electrocution hazard; ▪ Risk of fire; ▪ Arcing.	▪ Ensure personnel are aware of the dangers. ▪ Ensure appropriate cordons are in place. ▪ Do not approach or make contact with any part of the street furniture/charging point. ▪ Request attendance of a NIE, DRD representative, or private owner. Where possible, confirm unique number of street furniture or charging point. If unavailable, exact address will suffice.
Hybrid vehicles ▪ Electrocution hazard; ▪ Battery electrolyte.	▪ Identify if the vehicle involved is a hybrid – usually indicated by a badge at the rear of the vehicle. ▪ Consider allowing the vehicle to burn out. ▪ Normal precautions and PPE/BA should be used where appropriate. ▪ If a large amount of electrolyte is released, request a Hazmat Officer. ▪ Consider using a non-conductive extinguishing medium (CO^2) for small fires. ▪ For large fires, use copious amounts of water. ▪ If appropriate, disconnect the high voltage system as per manufacturer's instructions and Occupational Health, Safety & Welfare (OHS&W) Bulletin 4/2006. ▪ If electrolyte is in contact with skin, neutralise with large quantities of water.

Significant Hazards	Control Measures
Injury to non-Fire Service personnel involved in incident	▪ Establish an Inner Cordon. ▪ Escort non-essential persons out of the Inner Cordon. ▪ Any personnel working under NIFRS instruction within the Inner Cordon must be escorted by a Firefighter at all times. ▪ Inform Police Service of Northern Ireland (PSNI) to maintain the Outer Cordon. ▪ Any personnel working under NIFRS instruction within the Inner Cordon must report in/out of the Control Point to receive a full and comprehensive brief. ▪ Record details of brief (or any other relevant information) in the Incident Log.
Death or serious injury due to contact with Photovoltaic (PV) panel systems ▪ Electrical hazards potentially up to 1,000 volts DC; ▪ Falling panels; ▪ Broken/flying glass; ▪ Fighting fire in roof; ▪ Hidden fire-spread.	▪ Ensure personnel are aware of the dangers. ▪ Ensure appropriate cordons are in place. ▪ Do not work directly under panels in case of a collapse. ▪ Do not approach or make contact with any of the conduction parts. ▪ Arrange for the attendance of an electricity provider for specialist advice. ▪ Ensure that the mains power and solar isolation switch is off. **(NB - the solar panels and wiring to inverter/fuse board/isolation switch remain live.)** ▪ Identify the location of the inverter and cabling. ▪ Monitor fire-spread and inform personnel if the equipment/cabling becomes involved.
Rescues from undamaged electrical supply network ▪ Confined space; ▪ Remote location; ▪ WAH; ▪ High voltage up to 400,000 volts; ▪ Arcing; ▪ Battery banks.	▪ Ensure the use of minimum crews to effect rescue. ▪ Ensure personnel are wearing correct PPE at all times. ▪ Use WAH kit, if required. ▪ If voltage is less than 1,000 volts and not yet isolated, then attempt a rescue with electrical gloves or other insulated material. ▪ Request attendance of a NIE representative. ▪ Confirm from a responsible person what the voltage levels in the system are. ▪ Confirm and receive documentation for the electricity to be isolated, earthed and made safe (NIE or NIFRS Safety Declaration form). ▪ Maintain a minimum distance of 5 m until the system is isolated, earthed and made safe. ▪ Consider requesting the SRT for a specialist rescue.

Significant Hazards	Control Measures
Telecommunication masts ▪ Danger of electrocution from high voltage power supply	▪ Ensure power has been isolated before touching any part of the equipment. ▪ Be aware that the mast will have its own power supply even if it is top of a building. ▪ Request the attendance of an engineer of the mast owners.
Underground electrical fires, including Underground Distribution Box (UDB) ▪ Lid of UDB forcibly ejecting due to build-up of pressure; ▪ Asphyxiation due to - Fire gases; - Carbon Monoxide.	▪ Ensure that a gas monitor is available at the incident. ▪ Crews are to wear BA until adjacent buildings are checked for fire gases (CO). ▪ Have a charged hose line laid out for deployment. ▪ Monitor gas levels until the fire is extinguished and levels return to normal. ▪ Request the attendance of a Hazmat Officer. ▪ Request the attendance of a NIE representative. ▪ Request that power in the affected area is isolated. ▪ Cordon area around UDB. ▪ Check adjacent properties at point of electrical intake.
Vehicles in contact with power lines ▪ RTC/persons trapped in a car that is touching the electrical supply, such as overhead lines; ▪ Large vehicles in contact with overhead lines.	▪ If a casualty is trapped, maintain a safe distance of 10 m until NIE can confirm that the plant/apparatus is isolated, earthed and made safe. ▪ Set up cordons for the safety of all personnel. ▪ If the vehicle can be moved and the person(s) inside is (are) not injured, encourage them to drive clear of power lines. ▪ If the occupants of the vehicle can jump clear, get them to jump as far away from the vehicle as they can, with their legs together and not touching the vehicle when on the ground.

Significant Hazards	Control Measures
Wind turbine generation/ Installations ▪ Electrocution hazard; ▪ WAH/confined space; ▪ Machinery risk; ▪ Remote location; ▪ Projectile hazard from disintegration of wind turbine blade; ▪ Falling ice/debris from blade of wind turbine; ▪ Underground fires in or around buried cables from wind turbine, ie, bog fire risk to crews; ▪ Helicopter rescues.	▪ Most wind turbines have fire suppression systems and can be remotely stopped and power isolated prior to NIFRS starting operations. ▪ Cordons in place, allowing for falling ice. ▪ Ensure personnel have appropriate PPE (eg, lace-up boots) if travelling over uneven surfaces in rural areas. ▪ Ensure SRT is mobilised if a rescue is required. ▪ Do not approach if blades are still turning and the unit is on fire. ▪ Use a Thermal Imaging Camera (TIC) to ascertain the extent of the fire-spread. ▪ Consider allowing a wind turbine fire to “burn out”. ▪ Get advice from the wind turbine owner engineers and NIE. ▪ Be aware of underground electrical cables. ▪ If a fire is in the vicinity of cables (overhead or underground), ensure power is isolated to the area of operations.
Working at Height (WAH)	Use WAH principles in order to: ▪ Avoid WAH, where possible. ▪ Mobilise an Aerial appliance. ▪ Use WAH equipment. ▪ The IC should consult with the SRT. ▪ Only competent personnel are to use WAH equipment. ▪ Cordon off area below WAH operations. ▪ Safety Officer appointed and fully briefed to remain in visual/radio contact with crews WAH.

3 OPERATONAL CONSIDERATIONS

Safe Distances Adopted at all Incidents involving Electricity

Incidents	Safe Distances
Incidents/rescues involving low voltage equipment (less than 1,000 volts)	Use electrical gloves/other insulated materials to preform rescue.
Incidents/rescues involving **undamaged** high voltage equipment (more than1,000 volts)	Maintain a minimum safe distance of 5 m.
Incidents/rescues involving **damaged** high voltage lines (more than 1,000 volts)	Maintain a minimum safe distance of 10 m.
Incidents involving **sub-stations/ transformers including pole mounted transformers**	Maintain a minimum safe distance of 30 m.

3.1 EN ROUTE

Immediate Considerations

- Consider hazards likely to be present at the site from the mobilising information.
- Confirm if an Operational Risk Card is available on the Mobile Data Terminal (MDT), or carried on the appliance.
- Confirm type of apparatus and nature of the incident.
- Consider additional Fire Service resources that you may require on arrival.
- Brief crew and allocate roles.
- Consider hazards likely to be present.
- Safe appliance positioning.
- Ensure via RCC that the utility provider has been informed and confirm any information received.

Think through the phases of Managing Incidents

- Incident information.
- Resources information.
- Hazards and safety information.
- Think.
- Prioritise objectives.
- Plan.
- Communicate and control.
- Re-evaluate.

Consider Tactics

- Initial actions.
- Brief crews.
- Complete rescues if applicable.
- Life risk/no life risk.
- Continually re-evaluate.
- Resolve incident.
- Handover.
- De-brief.

Officer-in-Charge Considerations

- Focus on safety throughout.
- Direct operations by standing back.
- Liaise with other agencies.

3.2 IN ATTENDANCE

Initial Actions

Always be aware of the risk of electrical shock and the need for specialist advice. Unless life risk is involved, use defensive tactics and wait for the attendance of NIE representative/contractor.

- Gain information from persons on site, if available, whether life risk is involved, site layout, location of rescue/fire, etc.
- Where practical, while maintaining a safe distance, carry out a 360º reconnaissance of the site or send a Crew Commander/suitably briefed Firefighter to check and report back.
- Determine resources required.
- Identify hazards.
- Carry out a DRA.
- Determine Tactical Plan, control measures and Tactical Mode.

Informative Message

- Send an early informative message, stating nature of the incident, Tactical Mode and make-up as appropriate.

Brief Crews

- Brief Crews on the priorities, plan, hazards and control measures.
- Confirm evacuation signal.
- Confirm Assembly Point is to be at the Control Point.

Life Risk

- **Note** – water only to be used on electrical fire when supply has been isolated, earthed and made safe.
- The BA Team must have a fully charged firefighting jet before entering the risk if fire involved.
- Consider "snatch rescues" based on DRA (it is essential to receive advice from NIE as part of this process).
- A charged covering jet of sufficient length to reach the fire is to be set in place as soon as possible and should be as long as or longer than the firefighting jet.
- Consider the use of TICs.

No Life Risk

- If there is no life risk involved, do not commit crews until the electricity provider gives assurances of electrical safety and firefighting jets and covering jets are in place.

Rescues

- Carry out time-critical rescues maintaining safe distances from live electrical supplies for arcing in high voltage equipment and use electrical gloves for low voltage equipment.

Establish a Control Point

- As soon as resources permit, establish a Control Point for the incident.
- The Control Point must send an informative message stating the call sign of the Control Point and the name of the Incident Commander. For example - "*N4201 is now Control Point for this incident and the Incident Commander is Watch Commander Black".*
- The Control Point keeps blue lights on. All other appliances switch blue lights off, unless needed for scene safety, for example, in a busy roadway. Use hazard warning lights for additional warning if needed.
- All messages to Fire Control must be passed through the Control Point.
- The Control Point is to inform Fire Control every time the Incident Commander changes. For example - *"Station Commander White is now Incident Commander at this incident".*

Incident Command

- Sectorise the incident.
- Sector Commanders should be appointed to provide an effective span of control.
- Appoint and fully brief Safety Officers.

Continually Re-evaluate

- Incident information.
- Resources information.
- Hazards and safety Information.
- Think.
- Prioritise objectives.
- Plan.
- Communicate and control.

Informative Messages

- Send a Tactical Mode update and informative message every 20 minutes.

Complete Rescues

- Treat casualties.

Extinguish Fire

- Check adjacent apparatus and buildings.

Damping Down

- Maintain supervision.
- Do not relax PPE if hazards are present; dust masks, respirator facemasks or BA to be worn as appropriate.
- Use a TIC to confirm that all hot spots are extinguished.
- Cut away as required.

Handover

- To NIE, PSNI or other agency.
- If not present, make every effort to secure the site.
- If it is not possible to secure the site, request the RCC to inform the NIE/PSNI and make contemporaneous notes to that effect.

Stop Message

- Send stop message.

3.3 POST-INCIDENT

Critical Incident De-brief

- An officer will carry this out where appropriate.

Hot De-brief

- The IC is to ensure crews receive a Hot De-brief at the end of the incident.

De-Brief

- Carry out and feedback as appropriate.

Equipment Issues

- Replenish items used.
- Submit defects.
- Source replacement equipment via District.

Accidents or Near Misses

- Accidents to be fully investigated and reported as per normal procedures.
- Near misses to be reported as per normal procedures.

Medical Attention

- Medical attention to be sought as appropriate.

Decontamination of Fire Kit

- Standard procedures to be followed.

Review Operational Intelligence

- Amend Operational Risk Card, or initiate a new Site-Specific Risk Assessment.

Incident Recording Form (IRF)

- Complete IRF within 21 days.

4 PRE-INCIDENT PREPARATION

4.1 Relevant Literature

This SOP is supported by the following information, some of which is available from the Global Folder at G:\Document Management System:

- International Fire Professional, the Journal of the Institution of Fire Engineers – October 2013, Issue No 6;
- Firefighter Safety and Photovoltaic Installations Research Project;
- European Guideline CFPA-E No 22:2010 F – Wind Turbines Fire Protection Guidelines;
- OHS&W Bulletin No 4/2006 – Hybrid Cars;
- OHS&W Bulletin No 11/2011 – Hazards Associated with Photovoltaic (PV) Solar Panels;
- Operational Aide-Mémoire – Generic Hazards – Electricity;
- SOP 1 – Incident Command;
- SOP 2 – Incident Command System – Mobilising Arrangements;
- SOP 8 – Firefighter Emergencies;
- SOP 12 – Operational Intelligence;
- SOP 27 – Working at Height;
- SOP 30 – De-brief;
- SOP 40 – Trapped Persons;
- NIE Safety Rules Guidance “SRG5”.

4.2 Training

The following training shall be carried out, in accordance with the Area Training Strategy, to prepare in advance for fighting fires/performing rescues in electrical installations:

- Application of the Decision Making Model.
- Incident Command procedures.
- Practical drills on station - pumps, ladders, BA, foam drills, etc.
- On and off station exercises.
- BA refresher courses.
- Hazmat awareness.
- Methods of entry.
- Working at height.
- The use of MDT to access Operational Risk Card.

All training must be recorded on the Tracking & Training database to provide an effective audit trail.

4.3 Pre-planning

It is vital that personnel carry out pre-planning activities as follows:

- Gain knowledge of the station ground, roadways, water supplies and access points to premises/installations.
- Gain knowledge of the additional resources that can be called on to assist.
- Prepare Operational Risk Card for significant risks.
- Complete regular exercises on premises that have had a Site-Specific Risk Assessment completed on them.
- Carry sufficient maps on appliances for navigation.
- Carry out familiarisation visits to large electrical installations.
- Monitor road closures and determine alternative routes.
- Test, maintain and stow safely all PPE and equipment.
- Record PPE checks in PPE logs to provide an effective audit trail.
- Record weekly/monthly/quarterly equipment tests to provide an effective audit trail.
- Following visits, complete SC61(a) as required.

APPENDIX A

Northern Ireland Fire & Rescue Service

SAFETY DECLARTION FORM FOR HIGH VOLTAGE (ABOVE 1,000 VOLTS) ELECTRICAL INSTALLATIONS

ISSUE

On behalf of Northern Ireland Electricity **(NIE)**, I _____, declare that the following apparatus _____ _____has been isolated and earthed and I have issued a Permit for Work for that apparatus. It is safe, qualified by any restrictions detailed below, for NIFRS crews to carry out the following work on or adjacent to the apparatus:

Work: _____

Restrictions: _____

I further declare that the specified apparatus will remain isolated and earthed whilst this certificate is retained by NIFRS. **(NIE Authorised Person)**

Signed: _____ **Date:** _____ **Time:** _____ (**Hours)**

Receipt ***(to be completed by NIFRS Officer)***

I accept and understand the terms of this certificate, which I will return to NIE Authorised Person immediately upon completion. **(NIFRS Officer)**

Signed: _____ **Date:** _____ **Time:** _____ (**Hours)**

Completion ***(to be completed by NIFRS Officer on completion of work)***

I declare that all persons under my control have ceased the above work and have withdrawn to a safe distance from the above apparatus. **(NIFRS Officer)**

Signed: _____ **Date:** _____ **Time:** _____ (**Hours)**

Cancellation ***(to be completed by NIE Authorised Person)***

This certificate is hereby cancelled. (**NIE Authorised Person)**

Signed: _____ **Date:** _____ **Time:** _____ (**Hours)**

Copy to be retained by NIFRS Officer while crews are deployed in the risk area.