

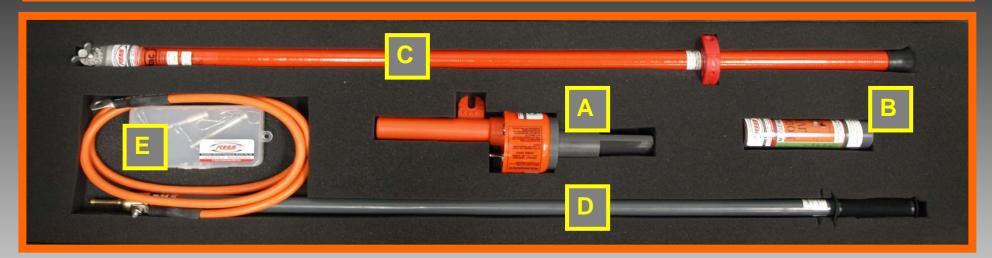
SNIPER 11kV COUPLER VOLTAGE DETECTOR KIT





2008 Sniper 11kV Coupler Voltage Detector Kit W1-3 Revision 0

1. Check last tested date.



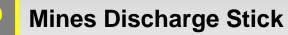
The kit contains:



Modiewark REES voltage detector

Operating Stick

- B
- **Modie Live Field Generator**



- Container inc. 2 special limit pins, 2 spacers and
 - 4 humpback clips (2 spares)

All equipment in the kit will have a sticker showing

the test date and the next test due date.



<u>WARNING</u> Proceed Only After All Isolation Procedures Have Been Implemented

Work Safe, the life you save may be yours!



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2.Preparation of the plug coupler prior to Modiewark 11kV testing.

Remove only the Top(12 o'clock) and Bottom (6 o'clock) bolts. Insert the Special Limit Pin then slide on the spacer, lock in place with the humpback pin. Remove remaining bolts. (Coupler pictures displayed are top view)



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3. Attach Modiewark to stick.

Set to required angle and tighten the wing nut firmly.

Ensure the aerial is clean and dry.





4. Test the Modiewark with the Modie Live.

Switch on the Modiewark. The buzzer will sound and the light will flash at regular intervals.

Push and **HOLD** the "POWER ON" button on the Modie Live and move it toward the tip of the Modiewark. The Modiewark light should illuminate continuously and the buzzer beeps continuously.



5. Always hold the stick below the hand guard when in use.





Place both hands behind hand guard



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6. Test for power in the coupler joint.

Partially separate the couplers 15mm. Take up tension on the limit pins. Insert the aerial of the Modiewark from the top or bottom of the couplers NOT THE SIDE. The aerial must be inserted fully and towards the connecting pins.



It is essential that the aerial is moved slowly between the special limit bolt and the location pin. If power is present the buzzer will sound and the light will illuminate.





7. Re-test the Modiewark with the Modie Live.

Push and HOLD the "POWER ON" button on the Modie Live and move it toward the tip of the Modiewark. The Modiewark light should illuminate continuously and the buzzer beep continuously.



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8. Separating the Coupler Connections

After Confirmation that the Circuit is NOT LIVE.

- •Return Clean Modiewark and Stick back to the Case.
- •Remove Retaining Pins, Spacer and Humpback Pins
- •Place Pins and Fittings back into Case
- •Separate the Coupler Connections



9. Connecting the Mines Discharge Stick

Firmly attach the earth connection from the Mines Discharge Stick to the supply side coupler earth.





10. Holding the Mines Discharge Stick



11. Using the Mines Discharge Stick





Keeping a safe working distance from possible live parts and holding the stick by the handle only, touch the tip onto the part be earthed.

Repeat for all phases/parts.

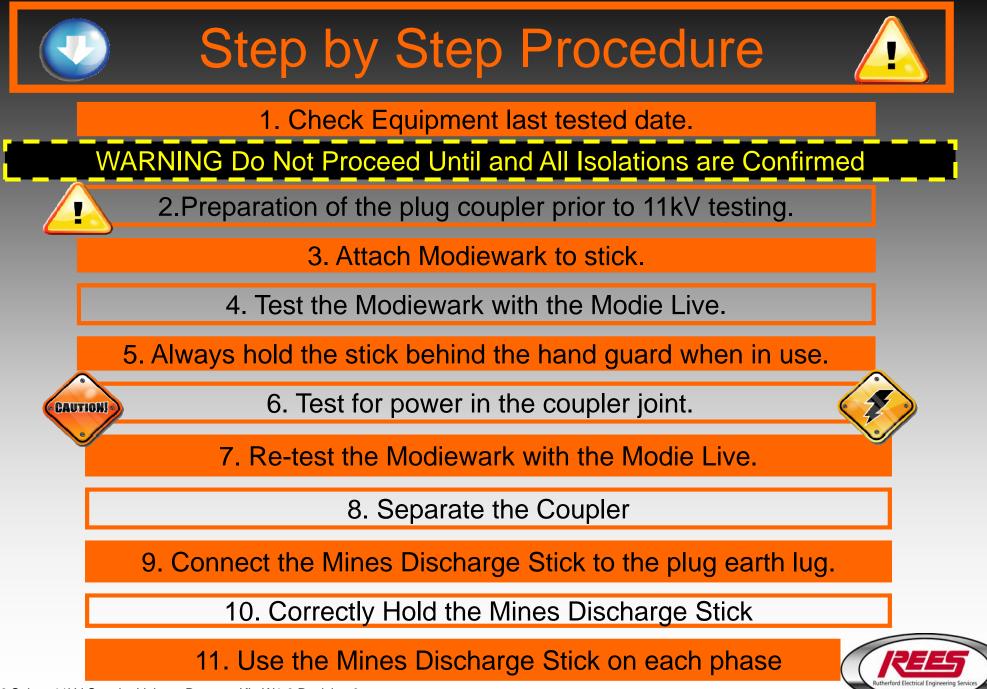


12. Storage when not in use.



Clean and replace all items into the case to prevent damage during storage. Fully close and lock the case to prevent ingress of dirt and moisture.





Annual testing

All equipment must be tested annually as per ISSC14 – Guide to electrical workers safety equipment or as per local guidelines.

- The Modiewark aerial must be power proof tested annually.
- Training on correct use of the Sniper Kit is available.

For more information contact

Luke Roper 02 4932 7344

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Couplers Tested with the Sniper Kit as at (20/04/08)

Ausproof – Ausproof 6600V and 11000V Ausproof – CMI 300A 6600V and 300A 11000V Ausproof – CMI 150A 6600V and 150A 11000V CMI 300A – CMI 300A 6600V and 300A 11000V CMI 300A – CMI 150A 6600V and 150A 11000V CMI 150A – CMI 150A 6600V and 150A 11000V



SPECIFICATIONS

200 volts

Emitted EMF: Frequency: Light source: Operating Temperature: IP Rating: Weight: Dimensions:

Battery:

Battery Life Activated Standby

57 Hz High Intensity LED -10 to 65'C (14 to 149'F) IP64 700g (includes Battery) Length = 172mm Dia = 47mm (max) 9 volt PP3 Alkaline (500mA Alkaline) 1 Hours 3 Months

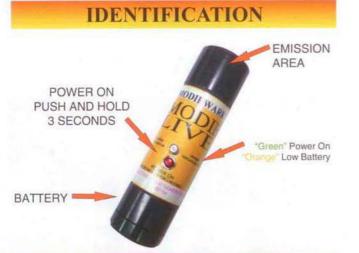
WARNINGS: DO NOT remove casing. DO NOT use if casing is worn or damaged as voltage generated may cause personal harm



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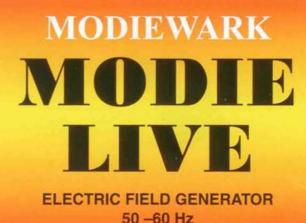
Address:	43 Orlando Road
	LAMBTON NSW 2299
Ph:	02 4952 6304
Fax:	02 4956 1054
E-mail:	sales@dn.eng.com.au
Website:	www.dn.eng.com.au



UNIT OPERATION

- This unit will test Non-Contact Voltage Detectors that require a frequency of 50 or 60 Hz and other testers with an open frequency response.
- By holding the unit under test with the power on in one hand, hold the Modie Live in the other hand and activate.
- To activate the unit depress and hold the button for a period of three seconds a Green light will indicate the unit is producing an electric field.
- If an Orange light appears on the Modie Live, this indicates the battery level is 7.5 volts and a replacement battery is required.
- The unit under test will display an activation, if this does not occur refer to the units under test manual.
- It is recommended that a unit test be conducted at regular intervals throughout the working period.





To be used with Non-Contact Voltage Detectors requiring 50 / 60 Hz

WARNING

HIGH VOLTAGE TESTING SHOULD ONLY BE CARRIED OUT BY TRAINED PERSONNEL DO NOT HOLD THIS INSTRUMENT WITH ANY ELECTRICAL CONDUCTOR.DO NOT REMOVE COVER NO REPAIRABLE PARTS HIGH VOLTAGE CONTAINED WITHIN.

POWER ON INDICATOR

On the front panel of the Modie Live a Green indicator will illuminate when activated. This will indicate an operating circuit.

LOW BATTERY INDICATOR

An Orange light will illuminate when the battery level falls below 7.5 volts. This requires a battery replacement replace with a 9 volt PP3.

LOW BATTERY INDICATOR

 To replace battery unscrew the rear of the Modie Live in an anticlockwise direction and pull apart.

- Unclip the PP3 battery from battery lead. Remove battery from holder and replace with a new battery.
- Reconnect the battery clip to the battery the correct way.
- 5) Place the wires and battery into the slot and screw in a clockwise direction



SAFETY INSTRUCTIONS

MINES DISCHARGE STICK CLA MDS Series



The purpose of a Mines Discharge Stick (MDS series) is to safely discharge any residual charge on HV equipment after it has previously been de-energised and proven to be earthed by first applying a fault rated earth system.

DO NOT

- 1. Do not use the stick as a first earth device to prove that HV equipment is deenergised. It is not a fault rated device.
- 2. Do not use the stick for any other purpose other than for the purpose above.
- 3. Do not use the stick in a wet environment.

DO

- 1. Before use, visually check that the lead is in good condition and is connected to an appropriate earth point.
- 2. Always keep the handle and lead clean and free of dust and moisture.
- 3. Appropriate personal protective equipment such as eye protection and gloves should be worn when applying the stick.
- 4. It is recommended that the location, condition, lead continuity from brass top end to lead end lug and insulation integrity of the handle are included in regular safety equipment inspections and audit plans.
- 5. If this product requires repair or maintenance, please contact the manufacturer below.





Task	Suppliers Guideline Risk Assessment For REES Sniper Kit Mk 1						
Date	23/04/2008 Compiled By REES						
Activity	Hazards			Control Measures			
1) Before Being Placed Into Service			nown to REES. Other	Ensure that you complete a written risk assessment which includes all hazards which apply to your industry and/or place of work. Carefully consider your local OH&S requirements and company procedures. This risk assessment is a guideline only.			
2) Before Being Placed Into Service	Electric shock. Equipment not fit for purpose.			This kit should be assessed and verified fit for the required purpose BEFORE being placed into service.			
3) Before Being Placed Into Service	Electric shock. Used on 11kV couplers other than that specified.			The REES Sniper Kit equipment is designed for use on specific mining couplers only and should NOT be used on other couplers or for any other purpose. Suitable for 6.6kV and 11kV Ausproof and CMI couplers and combinations thereof.			
4) Before Use Of Equipment	Electric shock. Operators not trained and authorised to use this equipment.		authorised to use this	Personnel should be trained, assessed competent and authorised before using this equipment. REES can provide operational training for use of the Sniper kit with a prerequisite that personnel are "currently" trained in HV safety and operating procedures.			
5) Before Use Of Equipment	Electric shock. Operating instructions not understood. Note: MDS = Mines Discharge Stick			The following list of information should be studied prior to using the sniper kit. REES Sniper Kit instructions WI-3 Rev 0, OEM warning labels printed on the modiewark, modie live and T-MAC operating stick, OEM operating instructions for the modie live and MDS.			
6) Before Use Of Equipment	Electric shock. System energised.			Ensure that the system under test has been isolated and earthed using site isolation procedures. All precautions including physically tracing above ground cables should be completed prior to verifying the isolation with the Sniper Kit.			
7) Before Use Of Equipment	Electric shock. Exceeding the rated working voltage of equipment.		ng voltage of equipment.	All test equipment supplied in the Sniper kit is rated for use on 11kV AC systems only. DO NOT apply the equipment to voltages greater than 11kV AC nominal.			





Task	Suppliers Guideline Risk Assessment For REES Sniper Kit Mk 1						
Date	23/04/2008 Compiled By REES						
Activity		Hazards		Control Measures			
8) Storage And Transportation	Electric shock. Equipment insulation failure due to damage in storage or transportation.		re due to damage in	Ensure that all Sniper kit items are cleaned and stored in the supplied protective ca when not in use.			
9) Storage And Transportation	Electric shock. Use by untrained or unauthorised personnel.		thorised personnel.	The sniper kit should be stored in a secure location accessible only to those authorised to use the equipment. When removed from its secure storage location, the kit should remain under the direct supervision of a person authorised to use the equipment.			
10) Before Taking To Test Site	Incorrect use due to items not being in kit.			Before taking equipment to the test site, ensure that the kit is complete and all items are serviceable. Ensure that the operating instructions for all equipment are located inside the kit.			
11) Lifting And Moving Sniper Kit	Back injury from lifting case into awkward locations.		l locations.	The Sniper Kit has a combined weight of 14kg and dimensions 135cm x 45cm x 15cm. Use correct lifting techniques when lifting the kit. Be particularly cautious when loading the kit into transport vehicles, where required use two persons to load the kit.			
12) Before Use Of Equipment	Electric shock, burns. User not wearing correct personal protective equipment.		correct personal	Carefully consider what PPE should be worn when using the Sniper Kit (this may vary from site to site)			
13) Before Use Of Equipment	Electric shock. Equipment not routinely tested.		tric shock. Equipment not routinely tested. Discharge stick all have "current" labels indicating that they have been routir in accordance with local requirements. The modiewark aerial must be additio power proof tested annually.				
14) Before Use Of Equipment	Electric shock. Ec	uipment damaged.		Visually inspect the modiewark, modie live, operating stick and mines discharge stick before each use ensuring that there is no visible signs of damage. The surfaces of insulating sections should not be scratched or fouled.			
Equipment							





Task	Suppliers Guide	line Risk Assessment	For REES Sniper Kit MI	(1		
Date	23/04/2008 Compiled By REES					
Activity	Hazards			Control Measures		
15) Before Use Of Equipment	Electric shock. Operating stick insulating properties degraded.		properties degraded.	DO NOT use the sniper kit equipment in wet conditions. ALWAYS ensure that all items of the kit are clean and dry before use.		
16) Before Use Of Modiewark	Electric shock. Modiewark inoperable.			Ensure that the modiewark batteries are in a serviceable condition. When the modiewark is turned on (not near live source), the batteries are serviceable if the beeper sounds and the indicating light flashes at 1 second intervals.		
17) Before Use Of Modiewark	Electric shock. Live circuit not detected due to modiewark fault.			Prior to and after using the modiewark for voltage detection verify that the modiewark is functioning correctly using "Modie Live" self tester supplied in the Sniper kit.		
18) Before Initial Separation Of Couplers	Electric shock. 11kV couplers inadvertently separated totally before testing.		ly separated totally	Before initially separating couplers, ensure that the supplied limit pins are installed in the "top" and "bottom" holes of the couplers as per the operating instructions and that the "humpback" securing pins and spacers are correctly in place.		
19) Using Modiewark	Electric shock. User too close to possibly energised specimen.		energised specimen.	Never use the modiewark unless it is securely fitted to the supplied insulating operating stick.		
20) Using Modiewark	Electric shock. Operator too close to possibly energised system		sibly energised system	Ensure that you are aware of the safe working distance from the system voltage being tested and ensure that you do not encroach this distance. ALWAYS grip the insulated operating stick below the handgrip.		
21) Using Modiewark	detect live couple	e placed in a "null" field	nd the coupler where the	The limit pins must be fitted to the "top" and "bottom" bolt holes of the coupler. The modiewark aerial must be inserted in the top or bottom of the couplers (preferably both) between the guide pins and the limit pins. Null fields exist at the sides, direct top and direct bottom of the coupler.		





Task	Suppliers Guideline Risk Assessment For REES Sniper Kit Mk 1							
Date	23/04/2008	Compiled By	REES					
Activity		Hazards		Control	Control Measures			
22) Before Use Of Mines Discharge Stick	Electric shock. Failure to correctly connect the mines discharge stick to the system earth.		Ensure that the mines discharge stick is connected to a known system earth prior to application. Ensure that the coupler earth bond remains in place during discharging and that the MDS is connected to the "supply" side coupler (known earth).					
23) Before Using Mines Discharge Stick	Electric shock. Application of mines discharge stick to lives system.			Prove the system de-energised prior to applying the mines discharge stick. The mines discharge stick is NOT a fault rated device and should NOT be used as a device for proving a HV system de-energised.				
24) Using Mines Discharge Stick	Electric shock. Operator too close to test point.			Ensure that you are aware of the safe work tested and ensure that you do not encroact the handgrip.	ing distance from the system voltage being h this distance. ALWAYS grip the MDS by			
Reviewed By (comp	Detent person):			Date:				
Name Of F	Name Of Persons On Job Signature		Signature	Name Of Persons On Job	Signature			
		+						

SPECIFICATIONS

200 volts

Emitted EMF: Frequency: Light source: Operating Temperature: IP Rating: Weight: Dimensions:

Battery:

Battery Life Activated Standby

57 Hz High Intensity LED -10 to 65'C (14 to 149'F) IP64 700g (includes Battery) Length = 172mm Dia = 47mm (max) 9 volt PP3 Alkaline (500mA Alkaline) 1 Hours 3 Months

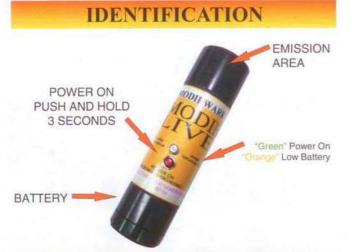
WARNINGS: DO NOT remove casing. DO NOT use if casing is worn or damaged as voltage generated may cause personal harm



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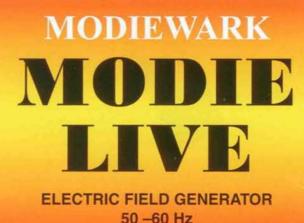
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E-mail:	sales@dn.eng.com.au
Website:	www.dn.eng.com.au



UNIT OPERATION

- This unit will test Non-Contact Voltage Detectors that require a frequency of 50 or 60 Hz and other testers with an open frequency response.
- By holding the unit under test with the power on in one hand, hold the Modie Live in the other hand and activate.
- To activate the unit depress and hold the button for a period of three seconds a Green light will indicate the unit is producing an electric field.
- If an Orange light appears on the Modie Live, this indicates the battery level is 7.5 volts and a replacement battery is required.
- The unit under test will display an activation, if this does not occur refer to the units under test manual.
- It is recommended that a unit test be conducted at regular intervals throughout the working period.





To be used with Non-Contact Voltage Detectors requiring 50 / 60 Hz

WARNING

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POWER ON INDICATOR

On the front panel of the Modie Live a Green indicator will illuminate when activated. This will indicate an operating circuit.

LOW BATTERY INDICATOR

An Orange light will illuminate when the battery level falls below 7.5 volts. This requires a battery replacement replace with a 9 volt PP3.

LOW BATTERY INDICATOR

 To replace battery unscrew the rear of the Modie Live in an anticlockwise direction and pull apart.

- Unclip the PP3 battery from battery lead. Remove battery from holder and replace with a new battery.
- Reconnect the battery clip to the battery the correct way.
- 5) Place the wires and battery into the slot and screw in a clockwise direction



SAFETY INSTRUCTIONS

MINES DISCHARGE STICK CLA MDS Series



The purpose of a Mines Discharge Stick (MDS series) is to safely discharge any residual charge on HV equipment after it has previously been de-energised and proven to be earthed by first applying a fault rated earth system.

DO NOT

- 1. Do not use the stick as a first earth device to prove that HV equipment is deenergised. It is not a fault rated device.
- 2. Do not use the stick for any other purpose other than for the purpose above.
- 3. Do not use the stick in a wet environment.

DO

- 1. Before use, visually check that the lead is in good condition and is connected to an appropriate earth point.
- 2. Always keep the handle and lead clean and free of dust and moisture.
- 3. Appropriate personal protective equipment such as eye protection and gloves should be worn when applying the stick.
- 4. It is recommended that the location, condition, lead continuity from brass top end to lead end lug and insulation integrity of the handle are included in regular safety equipment inspections and audit plans.
- 5. If this product requires repair or maintenance, please contact the manufacturer below.





Task	Suppliers Guideline Risk Assessment For REES Sniper Kit Mk 1					
Date	23/04/2008 Compiled By REES					
Activity	Hazards			Control Measures		
1) Before Being Placed Into Service	mitigate those risks not in place.		nown to REES. Other	Ensure that you complete a written risk assessment which includes all hazards which apply to your industry and/or place of work. Carefully consider your local OH&S requirements and company procedures. This risk assessment is a guideline only.		
2) Before Being Placed Into Service	Electric shock. Equipment not fit for purpose.			This kit should be assessed and verified fit for the required purpose BEFORE being placed into service.		
3) Before Being Placed Into Service	Electric shock. Used on 11kV couplers other than that specified.			The REES Sniper Kit equipment is designed for use on specific mining couplers only and should NOT be used on other couplers or for any other purpose. Suitable for 6.6kV and 11kV Ausproof and CMI couplers and combinations thereof.		
4) Before Use Of Equipment	Electric shock. Operators not trained and authorised to use this equipment.		authorised to use this	Personnel should be trained, assessed competent and authorised before using this equipment. REES can provide operational training for use of the Sniper kit with a prerequisite that personnel are "currently" trained in HV safety and operating procedures.		
5) Before Use Of Equipment	Electric shock. Operating instructions not understood. Note: MDS = Mines Discharge Stick		understood.	The following list of information should be studied prior to using the sniper kit. REES Sniper Kit instructions WI-3 Rev 0, OEM warning labels printed on the modiewark, modie live and T-MAC operating stick, OEM operating instructions for the modie live and MDS.		
6) Before Use Of Equipment	Electric shock. System energised.			Ensure that the system under test has been isolated and earthed using site isolation procedures. All precautions including physically tracing above ground cables should be completed prior to verifying the isolation with the Sniper Kit.		
7) Before Use Of Equipment	Electric shock. Exceeding the rated working voltage of equipment.		ng voltage of equipment.	All test equipment supplied in the Sniper kit is rated for use on 11kV AC systems only. DO NOT apply the equipment to voltages greater than 11kV AC nominal.		





Task	Suppliers Guideline Risk Assessment For REES Sniper Kit Mk 1						
Date	23/04/2008	Compiled By	REES				
Activity		Hazards		Control Measures			
8) Storage And Transportation	Electric shock. Ec storage or transp	quipment insulation failu ortation.	ire due to damage in	Ensure that all Sniper kit items are cleaned and stored in the supplied protective case when not in use.			
9) Storage And Transportation	Electric shock. Us	Electric shock. Use by untrained or unauthorised personnel.		The sniper kit should be stored in a secure location accessible only to those authorise to use the equipment. When removed from its secure storage location, the kit should remain under the direct supervision of a person authorised to use the equipment.			
10) Before Taking To Test Site	Incorrect use due	e to items not being in ki	t.	Before taking equipment to the test site, ensure that the kit is complete and all items are serviceable. Ensure that the operating instructions for all equipment are located inside the kit.			
11) Lifting And Moving Sniper Kit	Back injury from lifting case into awkward locations.		d locations.	The Sniper Kit has a combined weight of 14kg and dimensions 135cm x 45cm x 15cm. Use correct lifting techniques when lifting the kit. Be particularly cautious when loading the kit into transport vehicles, where required use two persons to load the kit.			
12) Before Use Of Equipment		Electric shock, burns. User not wearing correct personal protective equipment.		Carefully consider what PPE should be worn when using the Sniper Kit (this may vary from site to site)			
13) Before Use Of Equipment	Electric shock. Equipment not routinely tested.		ent not routinely tested. Ensure that the REES Modiewark, Modie Live, TMAC operating stick and Min Discharge stick all have "current" labels indicating that they have been routing in accordance with local requirements. The modiewark aerial must be addition power proof tested annually.				
14) Before Use Of Equipment	Electric shock. Ec	quipment damaged.		Visually inspect the modiewark, modie live, operating stick and mines discharge stick before each use ensuring that there is no visible signs of damage. The surfaces of insulating sections should not be scratched or fouled.			





Task	k 1					
Date	23/04/2008 Compiled By REES					
Activity		Hazards	-	Control Measures		
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16) Before Use Of Modiewark	Electric shock. Modiewark inoperable.			Ensure that the modiewark batteries are in a serviceable condition. When the modiewark is turned on (not near live source), the batteries are serviceable if the beeper sounds and the indicating light flashes at 1 second intervals.		
17) Before Use Of Modiewark	Electric shock. Live circuit not detected due to modiewark fault.			Prior to and after using the modiewark for voltage detection verify that the modiewark is functioning correctly using "Modie Live" self tester supplied in the Sniper kit.		
18) Before Initial Separation Of Couplers	Electric shock. 11kV couplers inadvertently separated totally before testing.		ly separated totally	Before initially separating couplers, ensure that the supplied limit pins are installed in the "top" and "bottom" holes of the couplers as per the operating instructions and that the "humpback" securing pins and spacers are correctly in place.		
19) Using Modiewark	Electric shock. User too close to possibly energised specimen.		energised specimen.	Never use the modiewark unless it is securely fitted to the supplied insulating operating stick.		
20) Using Modiewark	Electric shock. Operator too close to possibly energised system		Electric shock. Operator too close to possibly energised system tested and ensure that you do not encroach this distance. ALWAYS grip th operating stick below the handgrip.			
21) Using Modiewark	Electric shock. Incorrect use of modiewark causes failure to detect live coupler. There are areas around the coupler where the modiewark can be placed in a "null" field (areas where electric field cancels out).		There are areas around the coupler where the modiewark aerial must be inserted in the top or bottom of the couplers (prefer			





Task	Suppliers Guideline Risk Assessment For REES Sniper Kit Mk 1						
Date	23/04/2008	Compiled By	By REES				
Activity		Hazards	•	Control Measures			
22) Before Use Of Mines Discharge Stick	Electric shock. Failure to correctly connect the mines discharge stick to the system earth.		Ensure that the mines discharge stick is connected to a known system earth prior to application. Ensure that the coupler earth bond remains in place during discharging and that the MDS is connected to the "supply" side coupler (known earth).				
23) Before Using Mines Discharge Stick	Electric shock. Application of mines discharge stick to lives system.			Prove the system de-energised prior to applying the mines discharge stick. The mines discharge stick is NOT a fault rated device and should NOT be used as a device for proving a HV system de-energised.			
24) Using Mines Discharge Stick	Electric shock. Operator too close to test point.			Ensure that you are aware of the safe work tested and ensure that you do not encroach the handgrip.	ing distance from the system voltage being in this distance. ALWAYS grip the MDS by		
Reviewed By (comp	petent person):			Date:			
Name Of Persons On Job Signature		Signature	Name Of Persons On Job	Signature			