



VUL-APP-039-Low Voltage Electrical Appointment

Appointment:	Appointed Electrical 371 (sch7) of CMSHR 2017
Immediate Supervisor:	Electrical Engineering Manager (EEM)
Immediate Subordinates:	n/a
Competencies Required:	☐ Electrical Worker's Licence; ☐ Low Voltage Switchboard Rescue (LVR); ☐ Cardiopulmonary Resuscitation (CPR) Qualifications (refreshed 12 monthly); and ☐ Vulcan Electrical SOPs. (Please print and attach)
Role Function and Purpose:	A Low Voltage Electrical worker will carry out LV electrical work across site including installing, repairing, testing or disconnecting electrical components of electrical equipment and electrical installations in compliance with the requirements of the Electrical Safety Act 2002, Electrical Safety Regulation 2013, Queensland Coal Mining Safety and Health Act 1999, Queensland Coal Mining Safety and Health Regulation 2017, and Vulcan Safety and Health Management System.
Obligations and Responsibilities	
CMSH Act section 39	- To comply with this Act and procedures applying to the worker or person that are part of a safety and health management system for the mine; - If the coal mine worker or other person has information that other persons need to know to fulfil their obligations or duties under this Act, or to protect themselves from the risk of injury or illness, to give the information to the other persons; - To take any other reasonable and necessary course of action to ensure anyone is not exposed to an unacceptable level of risk. - To work or carry out the worker's or person's activities in a way that does not expose the worker or person or someone else to an unacceptable level of risk; - To ensure, to the extent of the responsibilities and duties allocated to the worker or person, that the work and activities under the worker's or person's control, - Supervision, or leadership is conducted in a way that does not expose the worker or person or someone else to an unacceptable level of risk; - To the extent of the worker's or person's involvement, to participate in and conform to the risk management practices of the mine; (- To comply with instructions given for safety and health of persons by the coal mine operator or site senior executive for the mine or a supervisor at the mine; - To work at the coal mine only if the worker or person is in a fit condition to carry out the work without affecting the safety and health of others; - Not to do anything wilfully or recklessly that might adversely affect the safety and health of someone else at the mine.
Your statutory responsibilities are:	
Ensuring the exploration operations are supervised in accordance with: - Electrical Safety Act 2002, - Electrical Safety Regulation 2013 - Queensland Coal Mining Safety and Health Act 1999, - Queensland Coal Mining Safety and Health Regulation 2017, and - the Vulcan Safety and Health Management System	



C = COMPETENT NYC = NOT YET COMPETENT

#	Low Voltage Electrical Assessment	C	NYC
1.	Define the voltage range for the following below as per the QLD Coal Mining Safety and Health Regulation? 1. Extra Low Voltage (AC): 2. Extra Low Voltage (DC): 3. High Voltage (AC): 4. High Voltage (DC):		
2.	All conductors in a particular circuit shall be individually tested, even if only one conductor is being accessed? a) True b) False		
3.	As an appointed electrical worker can you change or alter protection setting? A) Yes / No B) Explain:		
4.	Live work is prohibited at Vulcan Mine unless specifically authorised. True / False		
5.	Electrical drawings must be updated no later than eight days after commissioning or modifications. True / False		
6.	CMW are allowed to enter electrical operating areas without authorisation if they follow safety precautions. True / False		



#	Low Voltage Electrical Assessment	C	NYC
7.	What is an Arc Flash Event and what are some contributing factors?		
8.	What are some factors that determine / influence the intensity of an arc flash event?		
9.	List three methods using the risk management that can be adopted to reduce the risk of an arc flash event?		
10.	Who must approve electrical test equipment for use on-site? a) Senior Site Executive (SSE) b) Contractors c) Mine Inspectorate d) Electrical Engineering Manager (EEM)		
11.	List five pieces of information that can be found on arc flash stickers?		



#	Low Voltage Electrical Assessment	C	NYC
12.	What is the minimum clearances for the vehicles and machinery to operator in the vicinity of overhead power lines for the following voltages? 1. $\geq 1.1\text{kv} \leq 33\text{kv}$: 2. $\geq 33\text{kv} \leq 66\text{kv}$: 3. $\geq 66\text{kv} \leq 110\text{kv}$:		
13.	What are the colours of the listed locks below as per VUL-SOP-079-isolation and tagging sop? 1. Personal Lock: 2. Complex Isolation Lock: 3. High Voltage Isolation Lock: 4. Authorised Isolator Lock:		
14.	Electrical and Mechanical are two energy sources name three more primary or secondary energy sources stated in VUL-SOP-079-isolation and tagging sop?		
15.	What must be done to isolated equipment if the potential voltage exceeds low voltage? a) No additional action is required b) It must be earthed c) It must be tagged but not earthed d) It must remain isolated without testing		
16.	List the meaning of IP65 below: - I- - P- 6- 5-		
17.	Before energizing a new installation what documentation must be complete?		



#	Low Voltage Electrical Assessment	C	NYC
18.	Who is allowed to re-energize a tripped low voltage electrical circuit? a) Any employee in the area b) Authorised personnel trained in the procedure c) The supervisor or manager only d) Personnel with access to the circuit breakers		
19.	What should an electrical worker do BEFORE resetting a low voltage protection device? a) Start re-energizing the circuit immediately b) Wait for the circuit to cool down c) Immediately contact the supervisor d) Establish the circumstances surrounding the trip, such as visible flashes or an electrical burning smell		
20.	If the low voltage circuit cannot be reset, what is the next step for the electrical worker? a) Reset the circuit anyway and monitor it for faults b) Immediately tag out the circuit and begin further testing to find the fault c) Wait for a second opinion from a supervisor d) Re-energize the circuit temporarily until repairs are completed		
21.	What type of earthing system do we use on a coal mine? -		
22.	What is the minimum insulation reading you would accept for power cables or motors? -		
23.	Is bridging of field devices permitted on site? A) Yes / No B) If so what process must be followed?		



#	Low Voltage Electrical Assessment	C	NYC
24.	What is required when equipment is required to pass under an overhead power line at a non-designated crossing? a) No permit is required b) Only a supervisor's approval c) A written report to the Electrical Engineering Manager d) A permit and supporting Job Hazard Analysis (JHA) approved by the Electrical Engineering Manager (EEM)		
25.	In the following circumstances, list the relevant levels of reporting? A) Trailing cable on the High Waller Miner is damaged, the operator reports a flash, and protection of the substation trips.		
26.	What must be checked before issuing the permit for a non-standard crossing? a) The height of the overhead power line, by a surveyor b) The weather forecast c) The condition of the equipment d) The availability of a spotter		
27.	When is it ok to commence work repairing or replacing equipment that has been involved in an accident or incident?		



Competency Verification		
Electrical Licence No:	Expiry Date:	
CPR Expiry Date:	LVR Expiry Date:	
Candidate Sign Off		
<i>I understand and accept the responsibilities of the position of Low Voltage Electrical Worker at Vulcan Mine. I understand that it is my responsibility to ensure my Electrical Licence and LVR/CPR Qualifications remain current.</i>		
Name:	Signature:	Date:
Electrical Engineering Manager Sign Off		
<i>As the appointed Electrical Engineering Manager, I delegate the responsibilities listed above and appoint the person above to the position of Electrical worker at Vulcan Mine.</i>		
Name:	Signature:	Date:
Site Senior Executive Sign Off		
<i>As the appointed Site Senior Executive, I delegate the responsibilities listed above and appoint the person above to the position of Electrical worker at Vulcan Mine.</i>		
Name:	Signature:	Date:

It is the responsibility of the Low Voltage Electrical worker to ensure their Electrical Licence and LVR/CPR Qualifications remain current. Expiration of either of these competencies render this appointment null and void.