



**STANDARD OPERATING PROCEDURE**  
**FORM NO.HSE/CORP/4**

<b>ACTIVITY</b>	Excavation near buried power services			<b>SITE</b>	<b>SMC</b>	<b>DEPARTMENT</b>	<b>Mining</b>
<b>SOP NO.</b>	<b>IMFA/SOP/SMC/MINING/20</b>	<b>REVISION</b>	<b>00</b>	<b>EFF DATE:</b>	<b>19.6.14</b>	<b>NO. OF PAGES</b>	<b>Page 1 of 4</b>

Step No.	Activity (WHAT)	Associated Requirements/ Hazards/ Impact	Process / tools / PPEs (HOW)	Responsibility (WHO)	Remarks / Reference
1	Plan the work before excavation near buried power services	<b>OH&amp;S</b> – Nil			
		<b>Environment</b> - Nil			
		Quality – i) Planning	i) Careful planning are essential before the excavation work starts. Consider how the work is to be carried out.	Asst. Manager/ Electrical Engineer	DOC.NO. WI/OPRN/20
2	See the electrical installation plan and collect necessary information about the work place	<b>OH&amp;S</b> – Nil			
		<b>Environment</b> - Nil			
		<b>Quality-</b> i) See the buried services in the plan  ii) Take information about buried services  iii) Engage competent person  iv) Follow the marker provided	i) See the location of buried power services in the electrical installation plan.  ii) Know the required information about buried services and review before any excavation work starts.  iii) Engage competent person who have adequate knowledge about the buried services.  iv) Trace the cable location following the marker provided in the field.	Asst. Manager/ Electrical Engineer  Shift Incharge  Mines Foreman/ Electrical Foreman  Mines Foreman/ Electrical Foreman	DOC.NO. WI/OPRN/20
3	Locate the cable with cable	<b>OH&amp;S</b> – Nil			



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	detector	<b>Environment - Nil</b>					
		<b>Quality-</b> i) Locating the cable layout	i) The position of the cable in proposed work area shall be pin pointed by means of cable detector. Then the layout of cable shall be marked accordingly.	Electrician/ Mines Foreman		DOC.NO. WI/OPRN/20	
4	Take shut down	OH&S – Nil					
		<b>Environment-</b> Nil					
		<b>Quality-</b> i) Take shut down	i) After the lay out of hidden cable is marked, shut down will be taken to de energise from the sources.	Electrician/ Mines Foreman		DOC.NO. WI/OPRN/20	
5	Inform the details to the operator	OH&S – Nil					
		<b>Environment-</b> Nil					
		<b>Quality-</b> i) Inform details of the process to the operator	i) Inform details of the purposes, cutting procedure and necessary cares during trenching.	Mines Foreman/ Mining Mate		DOC.NO. WI/OPRN/20	
6	Deploy the machine for excavation	OH&S – i) Electrocutation	i) Never excavate to the buried services in energised condition. Shut down must be taken.	Shift Incharge		DOCNO. HIRA/MINING/20	
		ii) Striking by machine	ii) During excavation, no person will remain in the vicinity or within the working radius of the machine.	Mines Foreman/ Mining Mate			
		<b>Environment-</b> Nil					
		<b>Quality-</b> i) Careful excavation	i) Excavation will be carried in the presence of a competent person.  ii) Excavation work will be carried out in a careful manner. Excavation will be taken alongside the	Mines Foreman/ Mining Mate  Mines Foreman/ Mining Mate		DOC.NO. WI/OPRN/20	



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			service rather than directly above it.		
7	Do the final exposure of cable by manual means	OH&S – i)Cut injury	i)During manual excavation proper PPEs. must be used. Cutting tools shall be handled carefully.	Mines Foreman/ Mining Mate	DOCNO. HIRA/MINING/20
		<b>Environment-</b> Nil			
		<b>Quality-</b> i)Manual excavation	i)To avoid possible damage to the cable, the final exposure of the service will be carried out manually by using hand tools only.	Mines Foreman/ Mining Mate	DOC.NO. WI/OPRN/20
8	Check the conditions of cable after excavation and process is over	OH&S – i)Electrocution	i)Without checking the conditions of cable, clearances will not be given to supply power to the services.	Electrical Foreman	DOCNO. HIRA/MINING/20
		<b>Environment-</b> Nil			
		<b>Quality-</b> i)Charge the cable after clearance  ii)Checking the conditions of cable	i)After the purpose is over, intimate about the clearance and charging of the services to the attender at sub station.  ii)Determine the condition of cable by maggering device. If felt ok then after consultation, power supply will be continued.	Mines Foreman/ Electrical Foreman	DOC.NO. WI/OPRN/20
9	Layout of new cable below ground	OH&S – i)Electrocution	i)Every power services crossing the road below ground shall be laid through pipe line at adequate depth so that damage to the cable during road repairing or surface exposure can be avoided.	Mines Foreman/ Electrical Foreman	DOCNO. HIRA/MINING/20
		<b>Environment-</b> Nil			
		<b>Quality-</b>			



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	i)Provide marker for new installation	i)After layout of any buried power cable marker must be provided to know the direction of the hidden cable.	Electrical Engineer	
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<b>Name</b> <b>Designation</b> <b>Signature:</b> <b>Date:</b>	<b>Prepared by</b>  <b>M.K. Samal</b> Mines Manager	<b>Approved by</b>  <b>S. Patni</b> Sr. GM-SCM
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**NOTE :**

**SIX DIRECTIONAL HAZARD IDENTIFICATION DURING JOB :**

In addition to the above SOP, a 6-directional hazard identification sheet shall be used before start of the job. While executing the job at site, any hazards from six directions (**NORTH, SOUTH, EAST, WEST, TOP, BUTTOM**) to be assessed based on physical observation, common sense & experience. Controls shall be taken for any hazards thus identified.

**TRAINING RECORD OF SOP :**

The Training on this SOP with six directional hazards is to be imparted to concerned employee and contract workers by Shift In-Charge / Deptt. Head as applicable. The Training Record to be maintained in a register with signature of the individual employees before starting of the job.