



STANDARD OPERATING PROCEDURE

FORM NO.HSE/CORP/4

ACTIVITY	Unloading of materials at waste dump/Ore stack yard	SITE	SMC	DEPARTMENT	Mining
SOP NO.	IMFA/SOP/SMC/MINING/10	REVISION	00	EFF DATE:	19.6.14
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Step No.	Activity (WHAT)	Associated Requirements/ Hazards/ Impact	Process / tools / PPEs (HOW)	Responsibility (WHO)	Remarks / Reference
1	Allocation & allotment of dumpers	OH&S – Nil			
		Environment - Nil			
		Quality – i)Deployment of trained operator ii)Authorised persons will enter dump area. iii)Supervision	(i)The operator who is trained in the work of dumping shall be deployed in this job. ii)No person other than those authorised shall be permitted to enter or remain in the dumping yard. iii)A Foreman/Mining Mate with one spotter shall be present throughout the shift for effective supervision of dump yard.	Shift Incharge Shift Incharge/ Mines Foreman Shift Incharge	WI/OPRN/04
2	Define the place for unloading material	OH&S –Nil			
		Environment - Nil			
		Quality – i)Define the area where waste or mineral to be unloaded	i)All overburden/ore removed from the excavation shall be unloaded in the waste dump /Ore Plot. The area of operations shall be clearly defined and well communicated to the concerned people.	Shift Incharge	WI/OPRN/04



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3	Inspection & checking of dump area before the work to be started	OH&S –Nil			
		Environment -Nil			
		Quality – i) Inspection by supervisor ii) Checking the unloading area by driver	i) At the beginning of shift, a) inspect the dump area for presence of any soft spots, loose soil, water accumulation, berm, undercutting or cracks, if any. b) ensure the surrounding ground firm and stable and sufficient to hold the weight and resist the vibration of operating heavy equipment. ii) On entering a tipping area, check the dumping place than only back up to that area. Points to watch before backing are- a) soft spots b) berm (height) c) under cutting or cracking	Shift Incharge/ Mines Foreman Driver	WI/OPRN/04
4	Traveling in or out from the waste dump	OH&S –			
		i) Going over the edge	i) Beyond day light hour- a) do not operate whose rear flood lights have failed or get dimmed. b) which are not providing clear vision up to 10m. behind.	Driver	HIRA/Mining/10
		ii) Poor illumination	ii) Whenever the lighting in a dump is poor during dark hours- a) the dumping operation shall be stopped , unless proper lighting is provided.	Driver/ Mining Mate	
iii) Maintain safe distance of travel					



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		<p>iii)Dashing</p>	<p>between two dumpers not less than 30m. along the haul road.</p>	<p>Driver</p> <p>Driver</p>	
		<p>Environment - i)Extreme temperature</p>	<p>i)During hot weather, persons in the supervision will stay under a shed. They will ensure the provision of sufficient cool drinking water always.</p>	<p>Shift Incharge</p>	<p>Aspect No.34</p>
		<p>Quality- i)During travel to and from the dump maintain the speed limit.</p> <p>ii)Check the visibility in mirror or rear view camera</p>	<p>i)While turning the dumper for going to the dump yard- a)do not run at a speed more than 15km/hr b)blow the horn and follow the same procedure while coming back from the dump yard.</p> <p>ii)Check the back area view in the mirror or rear view camera and make rectification, if required.</p>	<p>Driver</p> <p>Supervisor</p>	<p>WI/OPRN/04</p>
5	Reversing for unloading of materials	<p>OH&S – i)Rushing to edge</p>	<p>i)While reversing for final dumping do not run at more than 10 km/hr speed.</p>	<p>Driver</p> <p>Driver</p>	<p>HIRA/Mini ng/10</p>



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		Environment – Nil			
		Quality – i)Check the safety appliances ii)Unsafe condition	i)While moving the dumper in reverse direction, ensure that Automatic Audio Visual Alarm System, Rear View Camera are in working condition. ii)If at any time you consider the operation unsafe, immediately report to the nearest supervisor.	Driver	WI/OPRN/04
6	Unloading of materials	OH&S – i)Electrocution ii)Tilting due to instability/electrocution by overhead cable	i)In the dump yard, no dumping shall be made nearly/directly beneath an electric overhead line/lighting tower. At least seven meters horizontal distance shall be left beneath the power lines for dumping. ii)The body of the dumper shall not be in raised condition when it is moving after dumping.	Driver/Spotter/ Dozer Operator Mining Mate/ Spotter	HIRA/Mining/10
		Environment - Nil			
		Quality - i)Drivers will follow the spotter's guidance. ii)Unloading of materials	i)Follow the guidance given by the spotter. Dump only in that place which is shown by the spotter. ii)Unload the material at least 3m from the edge of the dump. After dumping that will be pushed off by a dozer to form a berm at the edge of the	Driver Mining Mate	WI/OPRN/04



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		<p>iii)Tipping in new area</p> <p>iv)Tipping in an area where berm is not present.</p>	<p>tip.</p> <p>iii)When tipping commences in new area-material shall be dumped short of the tipping face and pushed up by a dozer to form berm at the edge of the tip.</p> <p>iv)When dumping in an area where no berm(i.e. construction of new haul road) is present-material must be tipped short of any edge and pushed into position by a dozer.</p>	<p>Mines Foreman/ Mining Mate</p> <p>Mines Foreman/ Mining Mate</p>	
7	Management of dump yard	<p>OH&S –</p> <p>i)Toppling at the edge</p> <p>ii)Toppling at the edge</p> <p>iii)Poor illumination</p>	<p>i)See that safety berm is being left by the dozer operator at the edge of the tip, a. The berm should have height not less than the diameter of the tyre of largest vehicle plying on the road.</p> <p>ii)Check that dozer provides the dump surface in a manner that gradient is always maintained against the reversal.</p> <p>iii)Ensure the adequacy of lighting beyond day light operation.</p>	<p>Mining Mate/ Spotter</p> <p>Mines Foreman/ Mining Mate</p> <p>Shift Incharge/ Mines Foreman</p>	HIRA/Mining/10
		<p>Environment-</p> <p>i)Pollution due to generation of dust</p>	<p>i)For suppression of dust, water sprinkling shall be done at regular intervals in the dump yard.</p>	<p>Mines Foreman/ Mining Mate</p>	Aspect No.18
		<p>Quality –</p> <p>i)Maintain the gradient</p>	<p>i)Dump yard shall be maintained as level as possible. Gradient at entry to the main dump yard shall not be exceeded to 1 in 14.</p>	<p>.Mines Foreman</p>	WI/OPRN/04



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		<p>ii)Maintain proper drainage</p> <p>iii)Maintain the natural slope</p>	<p>ii)“Drainage System”: shall be constructed on and around the dump yard-</p> <p>a) to prevent water logging and consequent slope failure of the dump yard.</p> <p>b)to divert rain water from flowing down the slopes.</p> <p>iii)The slope of a dump face shall be determined by natural angle of repose of the material being deposited, but shall not exceed 37.5 from the horizontal.</p>	<p>ShiftIncharge/ Mines Foreman</p> <p>Shift Incharge/ Mines Foreman</p>	
8	Inspection & Supervision	<p>OH&S –</p> <p>i)Fall of material</p> <p>ii)Going over the edge</p>	<p>i)No person shall be allowed to approach at the toe of an active dump, where he may be endangered from material rolling down the slope. Suitable warning signs at conspicuous places shall also be displayed.</p> <p>ii)See that the gradient of the dump is maintained in such a way that the dumper while reversing move against the gradient for unloading.</p>	<p>Mines Foreman/ Mining Mate</p> <p>Mining Mate</p>	<p>HIRA/Mini ng/10</p>
		Environment -Nil			
		<p>Quality –</p> <p>i)Use nose mask</p>	<p>i)During staying at dump yard the</p>	<p>Mines Foreman/</p>	<p>WI/OPRN/04</p>



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		<p>supervisor shall always use nose mask.</p> <p>ii)Use fluorescent jacket</p> <p>iii)Edge dumping prohibited</p> <p>iv)Warning equipments will be used by spotter</p> <p>v)Caution for unstable surfaces</p> <p>vi)Poor visibility and slippery condition of road</p> <p>vii)Inspection</p> <p>viii)Make inspection after heavy rain fall</p>	<p>ii)All the persons employed beyond day-light hours shall use fluorescent jacket and helmet with fluorescent band.</p> <p>iii)No edge dumping is permitted.</p> <p>iv)Use red-flag, whistle or torch light as per requirements during dumping operation.</p> <p>v)Unstable surfaces or edges shall be designated by red flags and will be so located to warn operators not to operate dumpers on these surfaces.</p> <p>vi)During rain when visibility is poor and road is in slippery condition dumping operation shall be stopped.</p> <p>vii)Inspection by officials-</p> <p>a)The shift incharge shall inspect the dump atleast once during shift.</p> <p>b)Mines Foreman shall inspect the dump yard at least twice i.e. at the beginning of shift and at the end of the shift.</p> <p>c)The Asst. Manager shall inspect the dump yard at least thrice a week.</p> <p>viii)Joint special inspections shall be made after heavy or prolonged rain.</p>	<p>Mining Mate</p> <p style="text-align: center;">-do-</p> <p>Asst. Manager</p> <p>Spotter</p> <p>Mines Foreman/ Mining Mate</p> <p>Mines Foreman/ Mining Mate</p> <p>I/C Shift/ Mines Foreman/ Asst. Manager</p> <p>I/C Shift/ Mines Foreman/ Asst. Manager</p> <p>I/C Shift/</p>	<p>WI/OPRN/04</p>
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		ix)Regular inspection in the monsoon x)Lightning/Thunderstorm	ix)Inspect the dump regularly in the monsoon. a)see the development of any cracks. b)water accumulation in the area c)chocking of drainage system d)localised collapse or subsidence etc. If observed shall be repaired immediately. x)During appearance of thunderstorm or lightning stop the operation.	Mines Foreman/ Asst. Manager/ Shift Incharge	
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Name Designation Signature: Date:	Prepared by M.K. Samal Mines Manager	Approved by S. Patni Sr. GM-SCM
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NOTE :

SIX DIRECTIONAL HAZARD IDENTIFICATION DURING JOB :

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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.