



Email Letter

Letter No

516358|SZ|Bengaluru Region|Perm|2020|6585|PLCommon_MMR1961|2

 <p>सत्यमेव जयते</p>	<p>भारत सरकार Govt. of India श्रम एवं रोजगार मंत्रालय Ministry of Labour & Employment खान सुरक्षा महानिदेशालय Directorate-General of Mines Safety</p>	
NO: 516358 SZ Bengaluru Region Perm 2020 6585		Date: 28/09/2020

प्रेषक/From,

खान सुरक्षा निदेशक/The Director of Mines Safety,

बेंगलुरुक्षेत्र, बेंगलूरु./Bengaluru Region, Bengaluru.

सेवामें,

Shri Sunil Kumar Singh,

Agent:Bhomman Iron Ore Mine,

M/s JSW Steel Ltd., ML No.014,

JSW Mining Office, Near Talur Cross,

Vidyanagar PO, Toranagallur, Sandur Taluk,

Bellari District – 583 275, Karnataka.

विषय:- Conditions governing the use for Heavy Earth Moving Machinery (HEMM) with a combination of deep hole drilling and blasting under Regulation 106(2)(b) of Metalliferous Mines Regulation, 1961 at Bhomman Iron Ore Mine, M/s JSW Steel Ltd., (Nominated Owner: Shri Dr Vinod Noval) in Sy.No.5-Bedara Bommenahalli, Sy.No.107-Hirekandavadi, Sy.No.9-Marijogihalli, Sy.No.21-Meghalahalli and Sy.No.18-Dindadahalli villages, (ML No.0014), Holalkere Taluk, Chitradurga District, Karnataka.-**Permission Thereof.**

महोदय,

Please refer to your application submitted vide letter No.JSW/Mines/Bhomman/DGMS/2020
21/02

dated 09.09.2020 and online ID No.139733 dated 21.09.2020 on the above subject along with surface Plan No.JSWSL/BIOM/KeyPlan/2020-21/01 dated 02.07.2020, Plan No.JSWSL/BIOM/SP/2020-21/02 dated 02.07.2020 and Plan No.JSWSL/BIOM/500m SP/2020-21/06 dated 02.07.2020 enclosed therewith.

The matter has since been examined in the light of what has been stated in your application. In exercise of the powers conferred on the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under the provisions of clause (2)(b) of Regulation 106 of the Metalliferous Mines Regulations, 1961 and by virtue of the authorization granted to me by the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under Section 6(1) of the Mines Act, 1952, I hereby specify following conditions governing use of Heavy Earth Moving Machinery (HEMM) **with deep hole drilling and blasting (diameter up to 115mm)** under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 to form benches in overburden & orebody at Bhomman Iron Ore Mine, M/s JSW Steel Ltd., (Nominated Owner: Shri Dr Vinod Noval) at Sy.No.5-Bedara Bommenahalli, Sy.No.107-Hirekandavadi, Sy.No.9-Marijogihalli, Sy.No.21-Meghalahalli and Sy.No.18-Dindadahalli villages, (ML No.0014), Holalkere Taluk, Chitradurga District, Karnataka:

I-OPENCAST WORKINGS

1.0 GENERAL:

1.1 Except where otherwise provided all applicable provisions of the Metalliferous Mines Regulations, 1961 shall be strictly complied with.

2.0 OPENCAST WORKING:

2.1 HEIGHT AND WIDTH OF BENCHES:

2.1.1 Owner and Agent shall ensure that scientific study for the mechanized opencast working including its method of working, ultimate pit slope, dump slope and monitoring of slope stability shall be made within one year and the mine has been planned, designed and worked as determined by the scientific study and a copy of the report of such study has been kept available in the office of the mine.

2.1.2 The height of benches in overburden, ore body or other rock formation **shall not be more than 6.0mt or maximum digging height of the machine used for digging, excavation or removal, whichever is less.**

2.1.3 Width of any bench shall not be less than -

- (a) width of the widest machine plying on the bench plus 2 m, or
- (b) if dumpers ply on the bench, 3 times the width of the dumper, or

(c) the height of the bench, whichever is more.

2.1.4 When persons are employed at the working face, adequate precautions shall be taken to ensure their safety by dressing the sides of the bench.

2.1.5 Formation of benches shall be done from the top downwards.

2.1.6 No person shall be engaged on work or allowed to travel close to high sides/benches, from where he is likely to fall more than 1.8 meters vertically down unless he is provided with and uses a safety belt or a rope or lifeline.

2.1.7 The sufficient number of safety belts shall be available at the site and shall be ensured for the use of the mine.

2.2 PRECAUTIONS AGAINST SURFACE STRUCTURES:

2.3 Before starting any quarrying operations, all dwellings, buildings, roads, public structures whether belonging to the owner or not shall be vacated/diverted and demolished.

2.4 You shall indemnify the occupants/owners of the houses/dwelling/buildings or other structures of the public authority concerned, if any, against the dangers to those properties or injury to them or other persons arising out of operations conducted under this Permission.

2.5 Quarry workings shall not be extended to any point within 45 m of public road existing in any direction of the mine.

2.6 FENCING AROUND OPENCAST WORKING:

2.5.1 The top edge of the opencast workings whether moving, abandoned or others shall be kept fenced with wire rope strands or barbed wire, supported by (movable) posts of timber, iron or concrete. The gap between the adjacent rope strands or wires shall not be more than 0.30 meters, and bottom-most member shall not be more than 0.25 meters, and the topmost member shall not be less than 1.0 meters from ground level.

2.5.2 At the finishing stage, opencast workings shall be fenced with masonry wall using cement concrete not less than 0.40 meters thick and not less than 1.5 meters high, with a parapet top.

2.7 ROADS FOR TRUCKS AND DUMPERS ETC:

2.7.1 All roads for trucks, dumpers or other mobile machinery shall be maintained in good condition.

2.7.2 Wherever practicable, all roads from the opencast workings shall be arranged to provide one-way traffic. Where one-way traffic it is not practicable, no road shall be of width less than three-time plus 5m width of the largest vehicle plying on the road.

2.7.3 All corner and bends shall be made in such a way that operator of the vehicle have a clear view of distance of not less than 3 times the braking distance of largest HEMM working at 40Km/hour.

2.7.4 Where it is not possible to ensure visibility for a distance as mentioned in clause (2.2.3), there shall be provided with two roads of a width not less than 2 times plus 3m of largest vehicle plying on the road with a strong road divider at the centre with adequate lighting and reflector along the divider.

2.7.5 Where any road existing above level of surrounding area it shall be provided with strong parapet wall/embankment of following dimensions:

- (a) Width at top-not less than 1 m.
- (a) Width at bottom-not less than 2.5 m.
- (b) The height not less than the diameter of tyre of largest vehicle plying on road. It may be noted that just dumping of mud or OB shall not be treated as strong parapet wall.

2.7.6 No road shall have a gradient of more than 1 in 16. However, the ramps with 1 in 10 gradients shall not be for more than 100m at one stretch.

3.0 SUPERVISION :

3.1 A person possessing First Class Mine Manager's Certificate of competency under Regulation MMR, 1961 shall be appointed as the Manager of the mine to look after HEMM operation. These governing conditions shall stand revoked as soon as the qualified Manager ceases to work at the mine. Use of HEMM shall be suspended in the absence of Manager with aforesaid qualification.

3.2 During every production shift, the opencast workings shall be placed under the charge of an Assistant Manager and during maintenance shift, the workings shall be placed under the charge of a Foreman. He shall be responsible for seeing that all the regulations and orders made thereunder are strictly complied with.

3.3 An adequate number of supervisors, including duly qualified Foremen and Mates, shall be appointed in each working shift to assist the Manager. Manager, Foreman and Mate shall be

responsible for seeing that all the regulations and the orders made thereunder are strictly complied with.

3.4 The deep hole drilling and blasting shall be carried out under the personal supervision of the Assistant Manager. Blasting parameters of each blast with a sketch showing the drilling pattern and the holes charged shall be maintained in the register kept for the purpose for each blast.

3.5 DUTIES OF MANAGER:

3.5.1 It shall be the duty of the Manager

- (i) to ensure compliance with the aforesaid precautions
- (ii) to determine compliance and specify in respect of every vehicle the maximum load to be hauled and a maximum speed of the vehicle and cause notices specifying the same to be posted along the road at appropriate places;
- (iii) to cause warning notices(drawing attention to any necessary precautions) to be posted along the truck or haulage roads at appropriate places like crossing, curves and turning points etc.
- (iv) to designate the persons authorized to ride on trucks
- (v) to give every truck driver directions in writing with respect to loads,speed, persons authorized to rides on trucks and precautions necessary for safe running
- (vi) to countersign entries in books and records to be maintained in pursuance of these precautions
- (vii) to take such other precautionary measures as may be necessary to ensure safe operation and maintenance of transport vehicles and for the safe work persons.

II- MACHINERY

4.0 DESIGN & MAINTENANCE OF MACHINERY& VEHICLES

- 4.1 Every Heavy Earth Moving Machinery shall be maintained in good and safe working condition.
- 4.2 Every Heavy Earth Moving Machinery shall be provided with efficient warning devices, adequate front and rear lights and efficient brakes. Every Dumpers/Truck shall be provided with Audio-Visual warning device, which shall be actuated automatically to produce both audible and visual warning system during reversal of vehicle and any other advanced mechanism like rearview mirror shall be provided.
- 4.3 Every shovel shall be so designed as to afford the operator clear and uninterrupted vision all around.
- 4.4 Operators cabin of every machine or vehicle shall be well designed and substantially built so as to ensure adequate protection to the operator against heat, dust, noise etc., and at the same time provide adequate safety to the operator in the event of overturning of heavy earthmoving machinery. A seat belt for the safety of the operator shall also be provided.
- 4.5 The code of instructions furnished by the manufacturers in the matter of maintenance of various machinery and vehicles and preventive maintenance schedules for each type of machinery and vehicle shall be strictly followed.
- 4.6 Every machine and vehicle shall be allocated at least one day in every week for maintenance. Before the machine or vehicle is sent out for work after maintenance, it shall be thoroughly inspected by the Engineer, mechanical foreman or other competent person authorized by the Manager in writing, who shall satisfy himself that the machine or vehicle is mechanically sound and in efficient working order.
- 4.7 A report of every inspection made under clause (4.6) shall be recorded in a bound paged book kept for the purpose and shall be signed and dated by the person making the inspection and countersigned by the Engineer
- 4.8 Every machine in use shall be thoroughly inspected once at least in every 24 hours by a competent person duly authorized by the Manager of the mine.
- 4.9 If the Engineer, Mechanical Foreman or other competent person making inspection, notices any defect in any machinery or vehicle, the said machinery or vehicle shall not be used until the defect has been remedied.
- 4.10 Any defect in machinery or vehicle reported by its operator shall be promptly attended to.
- 4.11 Any machine or vehicle found to be in an unsafe operating condition shall be tagged at the operator's position "OUT OF SERVICE, DO NOT USE" and its use shall be prohibited until the unsafe condition has been corrected
- 4.12 All repair to machinery or vehicle shall be done at a location, which will provide a safe place for the persons engaged on repairs
- 4.13 Except for testing, trial, or adjustment, which must necessarily be done while the machine or vehicle is in motion, every machine or vehicle shall be shut down and positive means are taken to prevent its operation while any repair or manual lubrication is being done.
- 4.14 Any machinery, equipment or part thereof which is suspended or held apart by the use of slings, hoists, jacks shall be substantially blocked or cribbed before men are permitted to work underneath or between such machinery, equipment or part thereof.
- 4.15 Power shall be disconnected when repairs are made to any electrical machinery.

4.16 While inflating tyres of transport vehicles, suitable protective cages shall be used. Tyres shall never be inflated by standing/sitting either in the front or on the top of the same.

4.17 Only such fitters or mechanics, who possess a driving license under Motor Vehicles Act shall be authorized by the Manager to test-run the HEMM.

4.18 The Brakes of all trucks-dumpers and other transport vehicles shall be tested at least once in every fortnight by a competent person duly authorized by the Manager of the mine in the manner detailed below:

Service Brake Test: The Service brake shall be tested with the vehicle is fully loaded condition on a specified gradient and speed. It shall stop within a specified distance by the manufacturer of the vehicle when the service brake is applied.

Parking Brake Test: The parking brake shall be capable of holding the truck/dumper/transport vehicle when is fully loaded and placed on the maximum gradient of the roadway which is permitted, for a period of at least ten minutes

4.19 A record of all such test shall be maintained in a bound paged book kept for the purpose and shall be signed by the person carrying out the test and countersigned by the Engineer and Manager of the mine.

4.20 Every dumper/tipper/truck shall be provided with automatically operating audio-visual reversing alarm, which shall always be kept in working order.

4.21 No person shall be permitted to work on the chassis of truck or dumper with the body in a raised position until the truck or dumper body has been securely locked in position. The mechanical hoist mechanism alone shall not be depended upon to hold the body of the truck or dumper in the raised position.

5.0 DAILY EXAMINATION OF MACHINERY AND VEHICLE:

5.1 At the commencement of every shift, the Engineer or Mechanic or Foreman or other authorized Competent persons shall personally inspect and test every machine and vehicle paying special attention to the following details:

5.1.1 That the brakes and the horn or other warning devices are in working order;

if the vehicle or machine is required to work after day light hours that the lights are in working order.

5.1.2 He shall not permit the vehicle or machine to be taken out for work nor shall he drive the vehicle unless he is satisfied that it is mechanically sound and in efficient working order.

5.1.3 He shall also maintain a record of every inspection in a bound paged book kept for the purpose. Every entry in the book shall be signed and dated by the person making the inspection.

6.0 OPERATION OF MACHINERY:

6.1.1 No person other than the operator or his helper if any or any person so authorized in writing by the Manager shall ride on a Shovel or Excavator.

6.1.2 No shovel or excavator shall be operated in a position where any part of the machine, suspended loads or lines are brought closer than three meters to exposed high voltage lines unless the current has been cut off and the line de-energized. A notice of this requirement shall be posted at the operator's control panel.

6.1.3 Electrical cables, if any shall be laid in such a manner that they are not endangered either by falling rocks or by mobile equipment.

6.2 If more than one stripping machine is in use in any area, either on the same bench or on different benches the machines shall be so spaced that there is no danger of accident from flying or falling objects etc. from one machine to the other.

7.0 DUTIES OF MACHINERY OPERATORS:

7.1 a) Every Heavy Earth Moving Machinery shall be under the charge of a competent person (herein called the `operator') authorized in writing by the Manager.

b) Operator/driver of each HEMM shall be selected from amongst persons possessing requisite qualifications. The selection process shall comprise a test to check driving/operating skill, aptitude, health and oral examination of the candidate by a competent selection committee. The selected person shall be trained, and their competency shall be evaluated by a board constituted by the mining company.

c) All operators of HEMM shall undergo regular checks to test their driving/operating skill, knowledge and health once in every five years.

d) To prevent unauthorized driving, a system shall be evolved whereby the ignition key and /or cabin key always remain with the driver/operator or with a specifically designated competent person

7.2 At the commencement of every shift, the operator shall personally inspect and test the machine, paying special attention to the following details:

7.3.1 That the brakes and every warning device are in working order.

7.3.2 If it is required to work after the daylight hours, all the lights on the vehicle are in working order.

7.3.3 The operator shall not take out the machine for work nor shall he work the machine unless he is satisfied that it is mechanically sound in efficient working order.

7.3.4 The operator shall not operate the machine when persons are in such proximity as to be endangered.

7.3.5 Operator shall not swing the bucket of a shovel over passing haulage units and other. While trucks are being loaded, he shall swing over the body of the truck/dumper and not over the cab, unless the cab is protected by a substantially strong cover.

7.3.6 The operator shall not allow any unauthorized person to ride on the machine.

8.0 OPERATION OF THE TRUCKS-DUMPERS & OTHER TRANSPORT VEHICLES:

8.1 The Manager of the mine shall frame a Standard Operating Guidelines/Code of Practice for the operation of trucks-dumpers and other vehicles on the following aspects and ensure its compliance.

8.2 No person shall be permitted to ride on the running board of a truck or dumper.

8.3 As far as possible, loaded dumpers or trucks shall not be reversed on gradients.

8.4 While reversing a vehicle at dump yard/stopping point suitable mechanism like stop blocks/earthen bund etc. shall be provided to prevent a vehicle from approaching towards the edge of

the dump.

8.5 Standard traffic rules shall be framed and followed during movement of all trucks and dumpers. They shall be prominently displayed at the relevant places in the opencast workings and truck/dumper roads.

8.6 When not in use every truck or dumper or another transport vehicle shall be moved to and parked at proper parking places.

8.7 No unauthorized person shall be permitted to enter or remain in any dumping yard or turning points.

8.8 While the vehicle is being loaded/unloaded on a gradient, the same shall be secured on a stationary position by parking brake and any other suitable mechanism.

9.0 DUTIES OF TRUCK/DUMPER OPERATORS:

9.1 At the commencement of every shift, the operator shall also personally inspect and test the machine, paying special attention to the following details:

- (i) That brakes and every warning device are in working order; and
- (ii) If the machine is required to work after daylight hours, that lights are in working order.
- (iii) He shall not take out the machine for work nor shall he operate the machine unless he is satisfied that it is mechanically sound and in efficient working order.

9.2.1 He shall not drive too fast, shall avoid distraction, and shall drive defensively. He shall not attempt to overtake another vehicle unless he can see clearly far enough ahead to be sure that he can pass it safely. He shall also sound the audible warning signal before overtaking.

9.2.2 When approaching stripping equipment, the driver of the dumper/truck shall sound the audible warning signal and shall not attempt to pass the stripping equipment until he has received a proper audible signal in reply.

9.2.3 Before crossing a road or railway line, he shall reduce his speed, look in both directions along the road or railway line, and shall proceed across the road or line only if it is safe to do so.

9.2.4 The operator shall sound the audible warning signal before while approaching 'blind' corners or any other points from where persons may walk in front unexpectedly.

9.2.4 The operator shall not operate the truck or dumper in reverse unless he has a clear view of the area behind the vehicle. He shall give an audible warning signal before reversing a truck or dumper.

9.2.5 The operator shall be sure of clearance before driving through tunnels, archways, plants, structures etc.

9.2.6 The operator shall see that the vehicle is not overloaded and that the material is not loaded in a dumper or truck so as to project horizontally beyond the sides of its body and that a red flag indicates any material projecting beyond the front or rear during the day and red light after daylight hours.

9.2.7 The operator shall not allow any unauthorized persons to ride on the vehicle. He shall also not allow more than the authorized number of persons to ride on the vehicle.

9.2.8 As far as possible loaded trucks or dumper shall not be reversed on gradient

9.3 "The Code of Traffic Rules" framed by the Mines Manager for movement of all trucks, tippers and dumpers prominently displayed at the relevant places in the opencast workings of the mine shall be complied with.

9.4.0 DUTIES OF DRILL OPERATORS:

9.4.1 At the beginning of the shift, the drill operator shall examine the drilling equipment and satisfy himself that –

- a. Crown blocks are mounted securely
- b. Where compressed air drills are used, all hose connections are in order
- c. the drilling equipment is in safe working condition

9.4.2 The drill operator shall ensure that-

- a. Persons keep clear of augur and drill stem while the drill is in motion
- b. Persons do not work or stand under suspended tools when tools are removed from the holes, these shall be lowered on the platform.

c. All finished drill holes are properly plugged so as to avoid possible leg injuries to anyone accidentally stepping into the holes.

10 SPOIL BANKS :

10.1 The spoil bank shall be designed and maintained scientifically.

10.2 The toe of the spoil bank shall not approach Railway or other public works, public road or building or other permanent structures not belonging to the owner of the mine closer than a distance equal to the vertical height of the spoil bank.

10.3 A suitable fence shall be provided between any railway or public works or road or building or structure and the toe of an active spoil-bank so as to prevent unauthorized persons from approaching the spoil bank.

10.4 No person shall, or shall be permitted to approach the toe of an active spoil bank where he may be endangered from material rolling down the face.

10.5 Any spoil bank exceeding 30 meters in height shall be benched so that no bench exceeds 30 meters in height and general slope does not exceed 1 vertical to 1.5 horizontal.

10.6 Wherever space permits, every mine shall establish a system whereby loading and unloading operations in the stockyard are not done simultaneously for the elimination of risk element in the operations. In case adequate space is not available, mine management shall organize suitable traffic regulations for eliminating risk element in the operations.

10.7 Extraction of mineral by reclamation from the dump or stockpile/yard shall be treated as working of opencast benches with loose overburden and all the precautions in respect of working of opencast benches with loose overburden shall be taken.

11.0 ADDITIONAL DUTIES ENGINEER IN CHARGE OF MACHINES AND VEHICLES IN OPENCAST WORKINGS:

11.1 During each shift, the machines and vehicles at work shall be placed under the charge of qualified and experienced Engineer to effect inspection, examination, safe operations and maintenance of the machines and vehicles. During his shift the competent shall;

- (a) inspect, examine machines, equipment and vehicles satisfy himself that they are in sound and safe working order;

- (b) not allow any machine and vehicles to be used, if it is found defective;
- (c) ensure that every machines and vehicle used is in a safe and efficient order;
- (d) ensure that each operation, activity is carried on in a safe and efficient manner.

11.2 PRECAUTIONS AGAINST DUST:

Adequately arrangements to suppress dry dust by wetting shall be made. If during any operation of drilling, loading, unloading, crushing, dressing etc., dust is likely to be produced in such quantity(not more than 3 mg/m³) as may be injurious to the health of persons, as also on roads and benches where and dumpers operate. Dust Survey shall be done as laid down in Regulation 124 of the MMR, 1961.

11.3 PROTECTION OF WORKERS AGAINST NOISE AND VIBRATION IN THE WORKING ENVIRONMENT:

Suitable steps shall be taken by all appropriate means to reduce the exposures of workers to any excessive noise and vibration. In this connection, the requirements of DGMS (Tech.) circular No's 18 of 1975 & 5 of 1990 shall be strictly complied with.

11.4 PROTECTIVE EQUIPMENTS:

Every person working in the opencast workings including workshops, other surface installations, yards etc. shall be provided with and shall use protective foot-wear and helmets of a type approved by the Chief Inspector and such other protective equipment's as may be prescribed from time to time by the Chief Inspector or the Regional Inspector in accordance with the provisions of Regulation 182,182A & 182B respectively.

12.0 PRECAUTIONS WHILE DRILLING:

12.1 The position of every shot - hole to be drilled shall be distinctly marked by the mine Foremen so as to be readily seen by the drillers.

12.2 No person shall be permitted to remain within a radius of 20m or within 60m on the same bench where charging of holes with explosives is being carried out.

13.0 TRANSPORT AND USE OF EXPLOSIVES:

13.1 Where explosives are transported in bulk, the following precautions shall be taken:

13.1.1 Transport of explosives from the magazine to the priming station or the site of blasting shall not be done except in original wooden or cardboard packing cases. The quantity of explosive transported at one time to the site of blasting shall not exceed the actual quantity required for use in one round of shots. Explosives shall be transported to the site of blasting not more than 90 minutes before the commencement of charging of the holes.

13.1.2 In accordance with DG's Approval Circular No. 2 of 1986, No mechanically propelled vehicle shall be used for the transport of explosives unless it has a valid license under Rule 61 of the Explosives 2008 and by strictly following the conditions stipulated therewith.

13.1.3 Every vehicle used for transportation of explosive shall be marked or placarded on both sides and ends with the word 'Explosives' in white letters not less than 15 cm high on a red background.

13.1.4 Every mechanically propelled vehicle transporting explosives shall be provided with not less than two fire extinguishers (one of carbon tetrachloride type for petroleum fire and the other of carbon dioxide under pressure type for electrical fire) suitably placed for convenient use.

13.1.5 The vehicle used for transport of explosives shall not be overloaded and in no case shall the explosive cases be piled higher than the sides of its body.

13.1.6 **Explosives and detonators shall not be transported in the same vehicle**, at the same time.

13.1.7 No persons other than the driver and his helper shall ride on a mechanically propelled vehicle used for transport of explosives.

13.1.8 A vehicle loaded with explosive shall not be left unattended.

13.1.9 The engine of a vehicle transporting explosives shall be stopped, and the brakes set securely before it is unloaded or left standing.

13.1.10 A vehicle transporting explosives shall not be driven at a speed exceeding 25 kilometres per hour.

13.1.11 A vehicle loaded with explosives shall not be taken into garage or repair shop and shall not be parked in a congested place.

13.1.12 A vehicle transporting explosives shall not be re-fuelled except in emergencies and only when its engine is stopped and other precautions are taken to prevent accidents.

13.1.13 No trailer shall be attached to a vehicle transporting explosives.

13.1.14 Every vehicle used for the transport of explosives shall be carefully inspected once in every 24 hours by a competent person to ensure that:

- (a) fire extinguishers are filled and in place;
- (b) the electric wiring is well-insulated and firmly secured;
- (c) the chassis, engine and body are clean and free from surplus oil and grease;
- (d) the fuel tank and feed lines are not leaking; and
- (e) lights, brakes and steering mechanism are in good working order.

13.1.15 Report on every inspection made under clause (13.1.14) shall be signed and dated by the competent person making the inspection.

13.1.16 All operations connected with transport of explosives shall be conducted under the personal supervision of a Foreman in charge of blasting operations at the mine.

13.1.17 The blaster shall personally search every person engaged in the transport and use of explosives and shall satisfy himself that no person so engaged has in his possession any cigarette, 'biri' or other smoking apparatus, or any match or any other apparatus of any kind capable of producing light, flame or spark.

13.1.18 Supply, issue, use and return of explosive records shall be maintained with authentication.

13.1.19 As required under Regulation 160(4) of Metalliferous Mines Regulation, 1961, no person whose wages/payment depends on the amount of mineral, rock or debris obtained by firing shots, shall be appointed to perform the duties of a blaster. **No outside person shall perform the duties of the blaster**, and it shall be done only by the statutory person appointed at the mine.

14.0 CHARGING OF HOLES:

- 14.1 Explosives shall be delivered first to the hole farthest from the priming station, so as to avoid persons walking among piles of explosives and charged holes.
- 14.2 Not more than one hole shall be charged at any one face at any one time.
- 14.3 All charging, stemming and connecting-up shall be done while standing on solid, that is to stay, on the side of holes away from the quarry face.
- 14.4 Burden and spacing shall be suitably adjusted to ensure proper fragmentation, effective utilization of explosive energy and throw of debris/ore does not exceed 10m.
- 14.5 No person shall be permitted to remain within a radius of 60 m where charging of holes with explosives is being carried out.

15.0 PRECAUTIONS DURING FIRING:

- 15.1 Shots shall not be fired except during hours of daylight. All holes charged on any one day shall be fired on the same day.
- 15.2 As far as practicable, shot firing shall be carried out either between shifts or during the rest interval, or at the end of work for the day.
- 15.3 Only moistened sand/aggregate of suitable size shall be used as stemming material.
- 15.4 Faces shall be maintained free from loose stones, pebbles. Vertical (or near-vertical) free face shall not be blocked.
- 15.5 Precautions with regards to taking shelter etc. as laid down in Regulation 164 of the Metalliferous Mines Regulations, 1961 shall be complied with to ensure that there is no danger to life and property (Whether or not belonging to the owner) due to this operation.
- 15.6 Notwithstanding what is contained in Regulation 164 of the Metalliferous Mines Regulations, 1961, no person other than a blaster and his assistants, if any, shall be permitted to remain within a radius of 20 meters in general or within 60 meter on the same bench while charging of holes with explosives is being carried out.
- 15.7 Notwithstanding anything contained in the Metalliferous Mines Regulations, 1961, the preparation of charges and the charging and stemming of holes shall be carried out under the personal supervision of a Mine Foreman who shall fire the shots himself, in respect of deep-holes.
- 15.8 During the approach and progress of an electric storm, the following precautions shall be taken:
- (a) no explosive, particularly detonators, shall be handled;
 - (b) if charging operations have been commenced, the work shall be discontinued until the storm has passed;

(c) if the blast is to be fired electrically, all exposed wires shall be coiled up and if possible placed in the mouth of the holes, or kept covered by something other than a metal plate/ conductive material;

(d) all wires shall be removed from contact with the steel rails or a haulage track so as to prevent the charge being exploded prematurely by a local strike of the lightning.

15.9 The danger zone shall be distinctly demarcated (by means of red flags properly arranged and supported) before charging of holes is to commence.

15.10 Before firing, a siren installed for the purpose shall be blown three times for one minute each at intervals of one minute; and no shots shall be fired unless the blasting foreman with the assistance of the sufficient number of persons appointed in writing by the Manager for the purpose has ensured that all persons have left the danger zone or have taken adequate shelter.

15.11 No shot shall be fired when there is traffic on any road or railway track within the danger zone only.

16.0 PRECAUTIONS AGAINST FIRE:

Arrangements for fighting fire shall be provided on all Heavy Earth Moving Machinery. Such arrangements shall, if possible, operate automatically on the appearance of fire.

17.0 GENERAL LIGHTING:

Efficient lighting arrangements not below the standards prescribed in DGMS circulars/orders etc. shall be provided and maintained in the mine.

18.0 MISCELLANEOUS:

18.1 Tractor-trailer combination shall normally not be allowed on haul roads. (Where inevitable, only four-wheeler trailers with separate brakes of their own shall be used.

18.2 Trucks, tippers and other heavy vehicles, not belonging to management shall not be allowed in the mine premises without a valid pass issued by the competent authority of the mine. Before the pass is issued, the mine engineer/competent person shall check the roadworthiness of such vehicle. In order to check the entry of such vehicle in the mine premises, properly manned check gate shall be provided at the mine entrance where the record of entry & exit of each vehicle shall be maintained. At the check gate, the license of the drivers shall also be checked for eliminating the possibility of unlicensed persons driving the vehicle.

18.3 Persons engaged in the surface operation and in particular, the contractor's workers shall be provided closer and competent supervision.

18.4 All persons engaged at any work within the mine premises through the contractors shall be provided with relevant training and other job related briefings, and it shall be ensured that the drivers of the vehicle belonging to contractors entering the mine premises have additionally been explained the salient provisions of "Traffic Rules".

18.5 Each and every operation, including the operation carried out through contractor's worker or by an outside agency, shall be placed under the charge of a competent supervisor, duly appointed and authorized by the Manager.

18.6 Manager shall frame Safe Operating Procedure (SOP) for each operation/equipment, and copy of it shall be handed over to all concerned. It shall be the duty of all statutory persons to enforce the SOPs so framed.

18.7 In case of "Dimensional Mining", Manager shall also frame safe operating procedure for the use of Derrick Crane, Mobile Crane, Wire-Saw, use of expansion chemical/mortar along with

use of excavators for the handling of granite blocks and the copies of the same shall be handed over to all concerned including all statutory persons for enforcement

18.8 All the precautions and directives given in DGMS circulars issued from time to time shall be compiled with.

18.9 The Owner, Agent and Manager shall ensure that the aforesaid conditions are made known to all concerned. They shall also ensure that every such person has fully understood the same and complies with them.

18.10 Please note that the above governing conditions are subject to the following additional conditions:

18.11 In the event of any change in the circumstances connected with the use of HEMM which is likely to endanger the life of workmen employed in the mine, operation for which these conditions have been imposed shall be stopped forthwith and intimation thereof sent to this Directorate. The said mining operation shall not be resumed without an express and fresh authority to that affect in writing from this Directorate.

18.12 These governing conditions may be amended or withdrawn at any time should it be considered necessary in the interest of safety.

18.13 These governing conditions being issued specifically under the regulations mentioned above and without prejudice to any other provision of law, which may be or may become applicable at any time.

18.14 This permission is valid for a period of 05(FIVE) years from the date of issue of the letter.

18.15 A hard copy of this permission shall always be kept in the office of the Manager of the mine for compliance.

Your Faithfully



UMESH MADHUKAR RAO SAWAKAR (DIRECTOR(ACTING) - BENGALURU REGION)

THIS IS A SYSTEM GENERATED DOCUMENT, DOES NOT REQUIRE ANY SIGNATURE.