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[kku lqj{kk egkfuns'kky;/Directorate General of Mines Safety
Hkkous'oj {ks=/Bhubaneswar Region
Plot No.L-1, Nayapalli, PO: RRL Campus, Bhubaneswar-751013 - FAX/Phone – (0674) 2302561

la[;k. BDH/CO-14/Surface Miner/2011/1068 Hkkous'oj fnukad 29/04/2011

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To

The Agent,
Kaniha Opencast Mine,
M/s. Mahanadi Coalfields Ltd.,
P.O. Deulbera Colliery, Talcher,
Dist. Angul (Orissa)

Sub: Approval of "Code of Practice" for deployment of surface miner for extraction of coal at Kaniha Opencast Mine of M/s Mahanadi Coalfield limited.

Dear Sir,

Please refer to your letter No.MCL/CGM(KA)/2011/15 dated 5/6.2.2011 and No.MCL/ CGM(KA)/2011/22 dated 13.3.2011 and draft 'Code of Practice' for use of surface miner enclosed therewith for approval. The matter has been considered in light of information furnished in your application. There is ***no objection*** in deployment of surface miner for extraction of coal at ***Kaniha Opencast Mine of M/s MCL***, as proposed by you. The "Code of Practice" submitted by you along with your letter No.MCL/CGM(KA)/2011/22 dated 13.3.2011 is hereby modified and approved as per the ***Annexure*** enclosed herewith, which shall be strictly complied with as also the following additional conditions:

1.0 Two copies of the "Code of Practice", modified and approved as above, are enclosed herewith as 'Annexure' for necessary action. The same shall be duly signed by the manager and one of signed copies returned to this Directorate for record.

2.0 The overall pit slope of the bench formed in coal on deployment of the surface miner shall not exceed 45^0 from horizontal at any place.

3.0 The Manager and his sub-ordinate staff, including the engineer, shall be responsible for securing effective compliance with the Code of Practice approved.

4.0 Where special difficulties exist or compliance of any of the clauses of the code of practice is not reasonably practicable, this Directorate may, by an order in writing and subject to such conditions as may be specified therein, relax any of the clauses of the above Code on specific request in writing by the management.

5.0 If at any time, any of the conditions subject to which this approval has been granted is violated or not complied with, this approval shall be deemed to have been revoked with immediate effect.

6.0 Please acknowledge receipt of this letter and return one copy of the code of practice, duly signed by you and the manager of the mine, for record.

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Encl: As above.

la[;k. BDH/CO-14/Surface Miner/2011/1069-71 Hkqous'oj fnukad 29/04/2011
Copy forwarded along with a copy of Code of Practice for information & necessary action to –

1. The Manager, Kaniha Opencast Mine, M/S MCL, PO: Deulbera, Dist: Angul (Orissa).
2. The General Manager, Kaniha Area, M/S MCL, PO: Deulbera, Dist: Angul (Orissa).
3. The Director (Tech)/Nominated Owner, M/S MCL, Jagriti Vihar, PO Burla, Sambalpur.

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Encl: As above.

la[;k. BDH/CO-14/Surface Miner/2011/1072-73 Hkqous'oj fnukad 29/04/2011

Copy forwarded along with a copy of Code of Practice for favour of information to –

1. The Director-General of Mines Safety, Dhanbad,
2. The Dy.Director General of Mines Safety, SEZ, Ranchi.

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Encl: As above.

la[;k. BDH/CO-14/Surface Miner/2011/_____/ Hkqous'oj fnukad ____/04/2011

Name of the Mine	:	Kaniha Opencast Mine
Name of the Owner	:	M/s Mahanadi Coalfields Ltd

Sub: Application for approval of "Code of Practice" for deployment of Surface Miner at Kaniha Opencast Mine of M/s MCL.

Ref: Management's letter No.MCL/CGM(KA)/2011/15 dated 5/6.2.2011 (RO Dy.No.363, dated 9.2.2011) and No.MCL/CGM(KA)/2011/22 dated 13.3.2011 (RO Dy.No.633, dated 14.3.2011).

Dealing level: Director of Mines Safety.

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1.0 Management of the mine has applied for approval of Code of Practice for using Surface Miner at Kaniha Opencast Mine of M/s Mahanadi Coalfields Ltd.

2.0 Kaniha Opencast Mine is a new mine opened in March, 2010. It is situated in the village Jarada, PS: Kaniha, Sub-division: Talcher, Dist: Angul of Orissa state and is in the north-central fringe of Talcher Coalfields. The lease of the mine is spread over an area of 606 hectares (about 1500 acres) approx, which is also included in the Survey of India Toposheet No.73G/4. The mine is well connected by road i.e. NH No.23 connecting Banarpal-Pallahara road to the eastern boundary of the mine at a distance of about 5 kms and is approachable by all weather road. The nearest town Talcher is about 25 kms south-east from the mine and the nearest railway station is Talcher which is about 35 kms away. The mine is proposed for a production capacity of 10 million tones of coal per annum as sanctioned by Govt. of India on dated 16.5.2008. It is proposed to be linked to NTPC Super Thermal Power Station, Kaniha, for supply of the produced coal.

3.0 There occur mainly four coal seams, named as Seam II (local), Seam II, Seam III and Seam IV, having thickness varying from 2.78 m to 46 m. As per project report, the average stripping ratio has been projected to be 1.63:1, however, the stripping ratio at initial stage upto 1st 3 years is expected to be 0.3 (approx.).

4.0 The exemption under Regulation 98(1)&(3) of the Coal Mines Regulations, 1957, for using HEMMs in conjunction with deep hole blasting has been granted by this Directorate vide letter No. BKODH/CO-14/P-98(1)&(3)/2010/2869, dated 24.11.2010, wherein a condition read as *"No surface miner shall be deployed in the mine unless approval of a suitable 'Code of Practices', as required under Clause No.20.2 of these relaxations has been obtained"* was incorporated. Now, according to the present application, the management intends to introduce and use surface miner for coal production in the mine and therefore, it has submitted for approval a draft "Code of Practice" in this regard.

5.0 *Recommendations:* We may not have any objection if surface miner is introduced in the mine subject to the strict compliance of the modified Code of Practice, enclosed herewith as an Annexure. A draft ***no objection letter*** along with modified 'Code of Practice' is enclosed for your perusal and approval please.

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Encl: DPL.

ANNEXURE

Annexure to letter No.BDH/CO-14/Surface Miner/2011/_____ dated _____/04/2011

CODE OF PRACTICE FOR USE OF SURFACE MINER AT KANIHA OPENCAST MINE

1.0 DESIGN OF SURFACE MINER:

1.1 The surface miner to be deployed shall be of adequate strength/power for cutting rock from the ground insitu, duly equipped with a mechanically driven milling drum fitted with adequate number of picks.

1.2 A copy of design, construction and other specifications as supplied by the manufacturer shall be kept maintained by the Engineer authorised for the purpose.

1.3 The surface miner shall be maintained in safe and good working condition at all times.

1.4 The surface miner and all its accessories shall as far as possible be constructed of fire-proof material. Any flammable material used for the purpose shall be shrouded with a substantial metallic covering. The surface miner shall be numbered and the same shall be conspicuously painted on all sides so as to be visible form a distance.

1.5 All instructions including hour meter, temperature gauge, battery charging indicator, pressure gauges and all warning devices shall be kept maintained in good working order at all times.

1.6 The electronic cutting depth control mechanism shall be maintained in good working order at all times.

1.7 Water spraying system on the milling drum/cutting picks shall be maintained in efficient working order to prevent liberation of dust. The spray nozzles shall be kept regularly cleaned.

1.8 Water spraying system on the milling drum/cutting picks of the surface miner shall be interlocked with its drum rotation so as to ensure full proof functioning/operation of the dust suppression system whenever its milling/cutting operation is in progress.

1.9 The operator's cabins of every surface miner shall be well designed and substantially built and made air-conditioned so as to render adequate protection to the operator against heat, dust, noise etc.

1.10 Padding and other cabin-shields shall be effectively used for reducing the sound and to protect the operator and the general public from excessive noise. If the noise level in the operator’s cabin is more than 90 dB, the machine shall not be operated until the noise level is brought down below the threshold limit or else the operator shall constantly use ear muffs.

1.11 In addition to suitable vibration dampi9ng devices fitted in the path of contact between machinery and operator, adequate number of cutting picks shall be so placed on the milling drum that machine vibration during milling action is reduced to a minimum and operator not exposed to vibrations beyond the recommended level. Frequency amplitude not exceeding 250 Hz and 0.01 mm respectively is the recommended threshold limit of vibration indicated by acoustic measurements.

1.12 The braking and/or emergency stoping mechanism shall be regularly examined and adjusted whenever necessary.

1.13 None of the safety features provided with the machine shall be altered or by-passed.

2.0 DESIGN OF PIT FOR THE SURFACE MINER:

2.1 Pits for deployment of surface miner shall be so designed that adequate slope for drainage of water out of the working area is kept maintained and flooding is prevented at all the stages of operation.

2.2 Layout and sequence of slices to be cut by the surface miner shall be so designed that ultimate pit slope is maintained within safe limits at all stages of operation, up to the maximum designed depth of the pit. Ultimate bench/pit slope shall not exceed 45^0 from horizontal at any place.

2.3 Height and width of surface miner benches:

(a) The final sides of surface miner faces shall be kept sloped and benched and the height of each such bench shall not exceed 10 m at any place and width thereof shall not be less than the height.

(b) Adequate length and width of face/bench shall be provided for operation of surface miner deployed in the mine, so that the surface miner is not required to be maneuvered often at the end of each cut for commencing the subsequent cut from the other end of the face. The numbers of loading machines, tippers and other machineries deployed at the face shall also be taken into consideration while deciding such length and width so as to provide sufficient space and avoid any over-crowding of operations.

2.4 Distance between two surface miners or between the surface miner and any other system of mining operating in close proximity shall not be less than 100 m.

3.0 ELECTRIC SYSTEM:

3.1 The batteries supplying electric power shall be in good working condition to provide enough power for starting the engine, headlights and for horn, and for giving pre-start warning signals.

3.2 All electrically operated safety and signaling devices shall be checked before beginning of each shift. Machine shall not be started until any defects noticed during such examination are repaired and put in order.

3.3 It shall be ensured that all safety guards and cover plates including panels, doors, belt-guards and heat-shields are correctly placed in position and securely bolted.

3.4 It shall be ensured that all the lights are properly working if the machine is to be operated after the day light hours.

4.0 SAFETY APPLICANCES:

4.1 Automatic fire protection system, which may consist of one or more containers of fire suppressant (usually a dry chemical) connected by a fixed plumbing net work to nozzles directed at specified predetermined fire hazard areas of the machinery, shall; be provided and maintained in working order for the surface miner. It is also necessary to adopt the testing procedure for such fire protection system as recommended by the manufacturer. Effective sensors shall be suitably located to sense the fire and actuate the suppressant to come out of the nozzles already fixed to deal with fire. An overriding manual system with adequate number of fire extinguishers of proper type and capacity to deal with all fire, electric fire and other fire hazards shall be provided in working order and so placed to be within easy reach of the operator/helper. The management shall also have direct liaison with the nearest fire station officer, in case of need to control any time fire hazard. A major source of water also identified in the mine for emergency use of big fire fighting engines of the fire station.

4.2 Fire extinguishers shall be examined and maintained in working order as per the provisions of Reg.120(3) of the Coal Mines Regulations, 1957.

4.3 Clean and filtered water in adequate quantity for dust suppression shall be kept filled up in the tank at all time during the operation and at intervals and also as and when required.

4.4 Ear-muffs shall be kept available in the cabin of the surface miner and shall be worn by all persons whenever the noise level exceeds 90 dB.

4.5 Effective means of two way communication shall be provided between the machine operator, his co-operator if any, and operators of dumper or other transportation system by using coded signals or otherwise for proper co-ordination. Code of signals, if being used, shall be kept displayed at conspicuous places and shall be strictly observed.

5.0 PRE-START PRECAUTIONS:

5.1 Before the machine is put to operation, the operator shall look for any placards/tags on the machine like "***out of order", "under repairs"***, etc., and in case such tags are seen anywhere in the entire system, the machine shall not be started.

5.2 A competent person shall examine the machine at the beginning of every shift as per the checklist provided by the Engineer for that purpose. Defects noticed during checking shall be rectified. Such checklist shall be countersigned by the Manager after compliance.

5.3 The status of the machine shall be confirmed from the Engineer (in-charge for maintenance of the machine) before starting. Attention shall be taken in respect of general working condition and its safety devices, namely brakes, horn and head lights including tail-lights. Any defect, if noticed, shall be reported to the engineer concerned and remedied before commencing the operation of the machine.

5.4 It shall be ensured that all walkways and ladders are kept clean and free from oil, grease or other spillage materials.

5.5 The windshield of the operator's cabin shall be kept clean and free from oil, grease or other spillage material.

5.6 Before starting the machine it shall be ensured that no person or any other obstacles are within the working radius of the machine and a pre-start warning signal shall be given to warn all the people in the area including the operator/helper.

5.7 Discharge conveyor of the machine shall be started prior to cutting operation. The operator shall ensure that dumper or any other system of transport has been positioned properly to accept load from the discharge conveyor before starting the cutting operation.

6.0 OPERATION OF SURFACE MINER:

6.1 The machine shall be operated by a person, duly trained and found to be competent, as also aware of all safety precautions. All operators shall be duly authorized by the Manager, in writing.

6.2 A copy of the code of practice and operator's instructions, in a language understood by them, shall be made over to all operators and to such other persons who assist in operation of the surface miner.

6.3 It shall be ensured that the dust suppression system of the machine is put in operation before starting milling/cutting operation. The spraying arrangement shall continuously be operated to ensure dust free environment.

6.4 The machine shall not be operated on a gradient higher than the one recommended by the manufacturer while operating on sloping surface. Necessary precautions, as recommended by the manufacturer, shall be taken while operating the machine on inclined surface.

6.5 The direction or speed of the machine shall not be changed all of a sudden, which can endanger the stability of the machine.

6.6 No unauthorized persons shall be allowed to ride or be present in the vicinity of the machine.

6.7 Unless otherwise specifically stated, any control of the machine shall be operated only when the engine is in running condition.

6.8 Discharge conveyor of the machine shall never be slewed over persons or power cables at any point of time. Discharge height of the machine shall be properly controlled to ensure that the same does not foul with dumper body.

6.9 The machine shall preferably be operated by a single operator, who shall himself adjust the cutting depth of the milling drum from the controls provided in the operator's cabin.

6.10 (a) If the surface miner is used for only cutting of coal by windrowing operation, the discharge conveyor including primary conveyor shall be removed.

(b) In such mode of operation, no other equipment like tipper or pay loader shall come close to it or operate in its close proximity.

(c) The windowed coal shall be gathered by pay loader/dozer after the surface miner has traveled out atleast for a distance of 50 m, and the gathered coal should subsequently be loaded into the tippers.

7.0 ADDITIONAL PRECAUTIONS FOR USE OF SURFAE MINER:

7.1 The guiding doors provided behind the milling drum of the surface miners shall be removed permanently from the machine, so that the need for any person to venture beneath the surface miner for closing the same during maneuvering of the machine is completely eliminated.

7.2 The machine shall preferably be operated by a single operator who shall himself adjust the cutting depth of the milling drum from the controls provided in the operators' cabin.

7.3 In case, assistance of a co-operator/helper is required to guide the operator for maneuvering the surface miner whilst the machine is operating near to the edge/toe of the bench, so as to prevent its toppling, such helper/co-operator shall at all times remain in the operators' cabin. In no case shall the helper/co-operator walk along with the machine or cross it from one side to the other whilst it is in motion.

7.4 In no case shall be operator/co-operator/helper/mechanic of the surface miner venture beneath the machine for inspector/examination/adjustment/repairs, etc., whilst its engine is running.

7.5 The operations of cutting and loading of coal, connected with each of the surface miner face, shall in each of the shifts be placed under personal supervision of an overman authorized for the purpose, who shall remain at the face as long as the machine is under operation. In case such operations cannot be supervised by an overman, for reasons of absence or otherwise, the same shall remain suspended for entire shift.

7.6 Adequate length and width of face/bench shall be provided for operation of each surface miner deployed in the mine, so that it is not required to be maneuvered often at the end of each cut for commencing cutting from the other end of the face.

8.0 SHUTTING-OFF OPERATION:

8.1 It shall be ensured that all conveyor belts, if used in conjunction with the surface miner, are emptied.

8.2 Discharge boom of conveying system, if used, shall be lowered to the normal or lowest position and if not possible, shall be secured by additional means by cribbing.

8.3 All controls shall be put in off or neutral position.

8.4 The ignition key must be removed from its place and shall be retained securely by the operator.

8.5 All compartments, shelves and doors shall be kept closed in a proper manner and secured.

8.6 The machine shall be secured fro any unauthorized operation, and against self-rolling or otherwise.

8.7 In the event of heavy rain or storm, the machine shall be stopped, its discharge hook lowered, and parked at a safe place.

9.0 SERVICING AND MAINTENANCE:

9.1 (a) A code of practice for inspection, examination and repair of all breakdowns and maintenance etc., shall be drawn up and implemented. Surface miners shall be maintained in accordance with the schedule prescribed by the manufacturer.

(b) Before the machine is put to work after maintenance, it shall be thoroughly inspected by the Engineer who shall satisfy himself that machine is mechanically sound and is in safe working order. A report of every such inspection shall be recorded in a register kept for the purpose.

(c) Every machine shall be thoroughly examined at least once in every shift and maintained in good and safe working condition.

(d) A record of examination and maintenance carried out in accordance with the above shall be maintained in a bound paged register, which shall be signed by the engineer in charge of the shift and countersigned by the Colliery Engineer.

9.2 (a) Every machine shall be allocated at least one day in every week for its maintenance, when it shall be thoroughly examined and inspected by the Engineer, who shall satisfy himself that it is mechanically sound and is in safe and efficient working order, before it is allowed to be re-deployed.

(b) A report of every maintenance made under clause (a) shall be recorded in a bound paged book kept for the purpose, and shall be signed and dated by person making the inspection and countersigned by the Colliery Engineer.

(c) If the engineer, mechanical foreman or other competent person making an inspection notices any defect in any machinery, the said machinery shall not be used until the defect has been remedied.

(d) Any defect in any machinery, reported by its operator, shall be promptly attended to.

9.3 (a) Any machinery 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. Proper tags indicating the nature of the work being done shall be placed conspicuously on the machine.

(b) All repairs to a machine shall be done at a location, which provides a safe place for the persons engaged on repairs.

(c) Except for testing, trial or adjustment, which must necessarily be done while the machine is in motion, every machine shall be shut down, and positive means taken to prevent its operation, before any repair, maintenance or lubrication is undertaken on it.

(d) Any part of the machine which is suspended or held apart by use of slings, hoists, or jacks shall be substantially blocked or cribbed, before men are permitted to work underneath or between the same. Similarly, all parts, which are raised hydraulically, shall be kept cribbed by additional means to prevent any movement of the raised parts by any chance of failure of hydraulic pressure or leakage or damage of hosepipes.

9.4 Servicing and maintenance work on a pressurized system shall be carried out only after ensuring that all the pressure in the system has been released.

9.5 Before carrying out lubrication, it shall be ensured that the machine is stand still and the ignition key is removed and is in the possession of the leader of the maintenance team.

9.6 It shall be ensured that the battery cut off switch is kept in ***"OFF"*** position and battery power cannot be transmitted to the engine by short circuiting.

9.7 The conveyor system, if used with the surface miner, shall be kept maintained in good condition as to prevent slippage of belt, spillage of the crushed material, liberation of dust, etc.

10.0 DUTIES OF SURFACE MINER OPERATORS:

10.1 At the commencement of his shift, the operator shall follow the pre-start precautions as detailed in Clause 5.0, and shall personally inspect and test the machine, paying special attention to the following details –

(a) That every warning device is in working order.
(b) That it is mechanically sound and in efficient working order, and
(c) That the lighting fixtures are in proper working order, if the machine is required to work beyond day-light hours.

10.2 He shall not take out the machine for work nor shall he work the machine, unless he is satisfied of its safe working order. If he finds any defect, he shall report to the Engineer and unless the defect is remedied, the machine shall not be operated.

10.3 The operator shall maintain a record of every inspection made under Clause 10.1 in a bound paged book kept for the purpose, and shall sing every entry made therein.

10.4 The operator shall keep the cab window clean so as to ensure clean vision at all times.

10.5 The walkways in or about the can of surface miner shall be kept free of loose tools, grease containers or other materials that might fall or give rise to tripping hazard.

10.6 The operator shall not operate the machine when persons are in such proximity as to be endangered. In event of inadvertent approach of persons to the working area of the machine whether or not being warned, the machine shall be stopped forthwith.

10.7 The operator shall not allow any unauthorized person to ride on the machine or operate it.

10.8 The operator shall not leave the machine unless he is relieved by his successor in case the mine is being worked round the clock.

10.9 He shall keep the wind screen and cabin in a clean and tidy condition and when the machine is not in operation, the cabin shall be kept locked to prevent unauthorized entry.

10.10 The operator shall ensure that water spraying system for dust suppression is effectively operated during milling operation of the machine.

10.11 The operator shall ensure that fire extinguishers are kept in position and in easy reach for operation.

10.12 The operator shall ensure that all ladders and fencings are in position.

10.13 The operator shall ensure that all protection covers and guards, warnings and stickers in the machine are in tact and securely fastened.

10.14 He shall follow the shut off procedure as detailed in Clause 7.0.

10.15 He shall follow approved code of signals for two-way communication.

11.0 DUTIES OF HAULING UNIT OPERATOR:

11.1 The operator of the hauling unit (dumper, tipper, etc.,) shall be a person who has been properly trained for its operation and is aware of all the safety precautions and found to be competent.

11.2 The operator of the hauling unit shall always maintain a safe distance from surface miner to avoid any collision with the machine or injury to the co-operator.

11.3 The operator of the hauling unit shall be fully acquainted with the signal system or any other mode of communication in vogue with the surface miner.

11.4 The operator of the hauling unit shall not try to move his vehicle across the steps formed due to surface miner operation in order to prevent toppling of the vehicle or any other unsafe condition.

11.5 The operator shall not reverse the hauling unit in close vicinity of surface miner without having a clear view of the area behind or without the assistance of the co-operator so as to avoid approaching dangerously close to the surface miner.

12.0 DUTIES OF ENGINEER:

12.1 The engineer, in collaboration with service engineers deputed by the manufacturers, shall explain the operation and maintenance schedules of the machine to supervisory personnel and mechanics. Accordingly, he shall formulate a check list and provide the same to competent persons for compliance in the beginning of each shift.

12.2 During each shift, the surface miner(s) deployed in the mine shall be placed under the charge of such number of qualified and experienced engineers as is adequate to effect adequate inspection, examination, safe operation and maintenance of the machine. He shall ensure that the mechanics and sub-ordinate supervisor/officials attending to the maintenance and repair of surface miner are competent to perform such jobs.

12.3 During his shift the engineer/engineers shall –

(a) Inspect and examine the surface miner(s) and satisfy himself that they are in safe working order;
(b) Not allow any machine to be used, if it is found defective;
(c) Ensure that each operation/activity concerning repair, maintenance and operation of machinery/equipment is carried on in a safe and efficient manner.

12.4 He shall countersign machine logbook and all other records required to be maintained.

13.0 ADDITIONAL DUTIES OF ASSISTANT MANAGER IN-CHARGE OF SURFACE MINER FACE/WORKING:

13.1 During every shift, he shall exercise overall control and guidance of operations connected with the surface miner.

13.2 During his shift the assistant manager shall –

(a) Make frequent inspections to check any unsafe conditions including evidence of slide of material from high wall(s), and shall ensure that operations are conducted in a safe and efficient manner.

(b) Ensure strict compliance and adherence by all of “Code of Practice” framed for deployment of surface miner.

(c) Ensure compliance of stipulations/conditions governing grant of permissions granted, and other provisions of the Coal Mines Regulations, 1957.

14.0 DUTIES OF MANAGER:

14.1 It shall be the duty of the manager to ensure effective compliance of the code of practice specified in respect of surface miners.

14.2 He shall authorize an Engineer for the maintenance of the surface miner.

14.3 He shall authorize in writing competent persons to operate the machine.

14.4 He shall authorize in writing competent persons for maintenance of the machine.

14.5 He shall take all possible precautionary measures that may be necessary to ensure safe operation and maintenance of machine, and for safety of the work persons.

14.6 He shall frame and enforce the code of signals for two-way communication between machine operator and rest of the crew in the system.

14.7 He shall also countersign all entries in the records and registers to be maintained in respect of surface miners.

15.0 PROTECTIVE EQUIPMENT:

15.1 Every person working in the mine shall be provided with, and shall use, a helmet and protective footwear of a type approved by the Chief Inspector of Mines.

15.2 Every mine official, supervisor and work person employed beyond day light hours with surface miner operation/repair/maintenance/inspection/supervision, shall be provided with, and shall use, fluorescent jacket and helmet with fluorescent band, so that his movement/position can be conspicuously judged by operators of such machinery, and the risk of his run over by mobile HEMM/dumpers/tippers is minimized.

16.0 RESPONSIBILITY:

16.1 The Manager and his subordinate staff including the Engineer shall be responsible for securing effective compliance with the code of practice approved for surface miners.

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Signature :
Name :
Designation : Manager
Mine : Kaniha Opencast Mine,
M/s Mahanadi Coalfields Limited.