



**State Environment Impact Assessment Authority, M.P.**  
(Ministry of Environment, Forest and Climate Change, Government of India)

**Environmental Planning & Coordination Organization**

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No.: 3678 ISEIAA No

Date: 14.10.20

To,

**M/s D.P. Rai**

Shri D.P. Rai, Nanhka,

10, East High Court Road, Ramdaspath,

Dist. - Nagpur (Mah.) - 440010

**Sub:- Case No. - 5681/2018** Prior Environmental Clearance for **Manganese Ore Mine** (opencast & underground method) with physical beneficiation through crusher in an area of 24.288 Ha. for Expansion in production capacity from 1300 TPA to 105987 TPA at Khasra no. 113, 114/1 to 114/5, 115/1 to 115/6, 116, 117/1, 117/2, 118/1, 118/2, 119, 130/1 to 130/3, 131/1 to 131/6, 132/1 to 132/5, 133/1 to 133/5, 134/1 to 134/9, 135/1 to 135/3, 247/3 (as per lease agreement) at Village - Miragpur, Tehsil - Khairlanji, Dist. - Balaghat (MP) by M/s D.P. Rai, Shri D.P. Rai, Nanhka, 10, East High Court Road, Ramdaspath, Dist. - Nagpur (Mah.) - 440010.

- I. This has reference to your letter received in SEIAA office on 10.05.2018 and subsequent letters seeking Prior Environmental Clearance for the above project under the EIA Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., the Form - I, Pre-Feasibility Report, ToR and subsequently submission of EIA, Public Hearing and the additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) and State Environment Impact Assessment Authority (SEIAA) constituted by the competent Authority.
- II. It has been noted that the proposal is Manganese Ore Mine with physical beneficiation through crusher in an area of 24.288 Ha. The mining lease area is located at khasra no. 113, 114/1 to 114/5, 115/1 to 115/6, 116, 117/1, 117/2, 118/1, 118/2, 119, 130/1 to 130/3, 131/1 to 131/6, 132/1 to 132/5, 133/1 to 133/5, 134/1 to 134/9, 135/1 to 135/3, 247/3 (as per lease agreement) at Village - Miragpur, Tehsil - Khairlanji, Dist. - Balaghat (MP). There is no National Park/Sanctuary/Biodiversity area within 10 Km radius. There is no forest boundary in 250 m distance from the ML area. The modified mining plan with progressive mine closure plan has been approved by IBM, Jabalpur (vide letter no. MP/Balaghat/Manganese/MPLN/MOD-10/2016-17/2602 Jabalpur dated 03.11.2016).
- III. The proposed project is for Expansion in production capacity from 1300 TPA to 105987 TPA Manganese Ore. The mining will be carried out by opencast & underground method. The total water requirement is 68.0 KLD (42.0 KLD for Dust Suppression + 10.0 KLD for Green Belt Development + 6.0 KLD for Domestic Purpose + 10.0 KLD for Drilling), which shall be met from existing mine pit & settling tank, while well water will be used for drinking purpose. The public

hearing was conducted on 07.02.2020 at Mine Parisar Village - Miragpur, Tehsil - Khairlanji, Dist. - Balaghat (MP) under the Chairmanship of Additional District Magistrate, Balaghat.

- IV. The project has been considered in accordance with the provisions of the EIA notification issued by the Ministry of Environment & Forests vide S.O. 1533 (E), dated 14th September 2006.
- V. Based on the information submitted, as at Para (II) above and others the State Level Environment Impact Assessment Authority (SEIAA) considered the case in its 635<sup>th</sup> meeting dtd. 01.09.2020 and decided to accept the recommendations of 450<sup>th</sup> SEAC meeting dtd. 13.08.2020.

**Hence, Prior Environmental Clearance is granted for Manganese Ore Mine (opencast & underground method) with physical beneficiation through crusher in an area of 24.288 Ha. for Expansion in production capacity from 1300 TPA to 105987 TPA at Khasra no. 113, 114/1 to 114/5, 115/1 to 115/6, 116, 117/1, 117/2, 118/1, 118/2, 119, 130/1 to 130/3, 131/1 to 131/6, 132/1 to 132/5, 133/1 to 133/5, 134/1 to 134/9, 135/1 to 135/3, 247/3 (as per lease agreement) at Village - Miragpur, Tehsil - Khairlanji, Dist. - Balaghat (MP) for the lease period to M/s D.P. Rai, Shri D.P. Rai, Nanhka, 10, East High Court Road, Ramdaspath, Dist. - Nagpur (Mah.) - 440010, subject to the compliance of following specific conditions as recommended by SEIAA & SEAC and subsequent Standard Conditions.**

#### **A. Specific Conditions**

1. Before commencing any mining activity fencing shall be carried out all around the lease area. Proper watch and ward arrangements should be made with installation of signage at 4 corners of lease area to avoid any untoward incident involving public and animals by the PP.
2. Plantation programme as mentioned in EIA/EMP and presented during presentation in SEIAA & SEAC shall be followed in content and spirit.
3. PP shall demarcate a barrier zone of 7.5 m as no mining zone in the periphery of mining lease area and develop a green belt. Three row plantations shall be carried out in the greenbelt area in current year with proper watering arrangement.
4. The mining operation shall be restricted to above ground water table and in no case it should intersect the ground water table. In case of working below the ground water table approval of the Central Ground Water Board shall be obtained.
5. Total 16,480 saplings shall be planted by PP under plantation programme. Suitable tree species i.e. Neem, Pipal, Bargad, Mango, Karanj, Sissoo, Jamun, Gulmohar, Munga, Amla, Drumstick, Mahua, Kathal etc. shall be planted by PP under plantation programme at Mine Site and in consultation with DM at identified revenue land of the district. PP shall also explore and identify the chunk of land in the area from revenue record to carry out plantation programme as proposed.
6. The over burden and waste will be stacked for five years and then simultaneously backfilled in the mined out area where plantation will be raised on it.
7. No overburden will be dumped outside the mine lease area.
8. Regular water quality monitoring shall be carried out by PP before discharging it into the nearby agriculture fields from authorized laboratory in consultation with Regional Officer, MPPCB. Regular air and noise quality monitoring shall also be carried out at regular interval from authorized laboratory in consultation with Regional Officer, MPPCB.
9. PP shall ensure generation of employment opportunities to nearby Village on priority bases.
10. Payments of wages to the workers shall be done in consonance with the provisions in the labour laws.
11. Proper infrastructure with shelter, drinking water, toilet and first-aid facilities shall be provided for the laborers. A provision should be made to construct a pakka rest shelter along with toilet and drinking water facility.
12. PP should also carry out regular sprinkling of water in the mining lease area to arrest dust emission from mining activities affecting the nearby agriculture fields
13. Mining shall be limited to the area as shown in surface plan and as per the approved mining scheme.

14. PP shall ensure to construct and maintain approach road from the mine site. Plantation will be carried out on both sides of the approach road. PP shall also ensure maintenance of existing pakka road in consultation with competent authority.
15. PP shall ensure proper water supply arrangements for plantation especially in summer season.
16. PP shall ensure proper implementation of plantation, dust suppression, construction of approach road and maintenance of existing pakka road as part of Environmental Management Plan. Additional budget provision shall be made as part of EMP.
17. PP must ensure the implementation of following activities with separate budget provision of total Rs. 6.0 Lakhs/- under CER as committed:
  - a) Infrastructure support for school/aganwadi building repairing, toilets, fresh water supply etc as per recommendation by Gram Panchayat / Gram Sabha at nearby villages Miragpur, Gudrughat, Sawargaon, Rammohangaon Ghat.
  - b) Execution of need base activity i.e. hand pump, drainage line, road etc as per recommendation by Gram Panchayat/Gram Shabha at nearby villages Miragpur, Gudrughat, Sawargaon, Rammohangaon ghat .
  - c) Development of grazing land at nearby village - Miragpur.

**The modification to the above activities can be made with the permission of the district administration and need based activity for the development of nearby villages shall be implemented by PP in consultation with the District Collector and Grampanchayat.**

18. PP should ensure to submit half yearly compliance report, Plantation and CER activity report along with photographs of all activities in MP-SEIAA. If PP is failed to upload or submit two consecutive half yearly compliance reports of EC conditions to concerned authority (SEIAA and Regional Office, MoEF&CC,Gol,Bhopal) than prior environmental clearance issued to PP will automatically be treated as cancelled/ revoked as per OM No. 930/SEIAA/2019 dated 30.05.2019 issued by MPSEIAA.

## **B. Statutory compliance**

19. This Environmental Clearance (EC) is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any Court of Law, Common Cause Conditions as may be applicable.
20. The project proponent complies with all the statutory requirements and Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
21. The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgments of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
22. Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish/Consent to Operate from the concerned State Pollution Control Board/Committee.
23. The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Department & Regulation, Act, 2015 and rules & regulations made there under PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.
24. The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.
25. The project proponent shall follow the mitigation measures provided in MoEFCCs Office Memorandum No. Z-11013/57/2014-IA.II(M) dated 29th October 2014, titled "Impact of mining activities on Habitations-

issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area" .

26. The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water/ if GW intersection is proposed for the project.
27. State Pollution Control Board/Committee shall be responsible for display of the EC letter at its Regional Office, District Industries Centre and Collector's office/Tehsildar's Office for 30 days.
28. The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership of mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provision of the Para-11 of EIA Notification, 2006 as amended from time to time.
29. In case of sand stowing with tailings, lechate study shall be carried out and same shall be executed only after approval from the MP Pollution Control Board. PP shall also explore the possibility of using inert materials such as fly ash/ceramic waste after proper scientific study.

### **C. Air quality monitoring and preservation**

30. The Project Proponent shall install a minimum of 3 (three) Ambient Air Quality Monitoring Stations with 1 (One) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz, PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18/11/2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building. Canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in from of the main Gate of the mine sit.
31. Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc) shall be carried out in areas prone to air pollution wherein high levels of pM10 and PM2.5 are evident such as haul road. Loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/machineries and preventive maintenance. Use of suitable water soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. In shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/Central Pollution Control Board.

### **D. Water quality monitoring and preservation**

32. In case immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
33. Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground Water level and quality shall be submitted on six-monthly basis to the Regional office of the Ministry, CGWA and State Groundwater Department/State Pollution Control Board.
34. Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in an around the mine lease by establishing a network of existing wells as well as new piezo-meter installations

during the mining operating in consultation with Central Ground Water Authority /State Ground Water Department. The Report on changes in ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department/State Pollution Control Board.

35. The project Proponent shall undertake regular monitoring of natural water course/water resources/springs and perennial nallahs existing/flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability of usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/bodies existing in lease area shall be carried out four times in a year viz. pre-monsoon (April-May), monsoon (August) post monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environmental, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Ground Water Board. State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six monthly bases.
36. Quality of pollution water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1/2006-IA.II(M) dated 27/5/2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard
37. Project Proponent shall plan develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water/State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional office MoEFCC annually.
38. Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
39. The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

#### **E. Noise and Vibration monitoring and preservation**

40. The peak particle velocity at 500 m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
41. The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operation. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed, by orienting the floodlights/masks away from the villagers and keeping the noise levels well within the prescribed limits for day/night hours.
42. The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM etc. should be provided with ear plugs/muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case in has been found that workers/personals/laborers are working without personal protective equipment.

## F. Mining plan

43. The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, overburden, interburden and top soil etc. NO change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz, method of mining, overburden & dump management, O.B. & dump mining, mineral transportation mode, ultimate depth of mining etc) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form of Short Term Permit (STP), Query license or any other name.
44. The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the provision of the MMDR Act, 1957 and Rules/Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.
45. The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

## G. Land Reclamation

46. The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S. w.r.t safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.
47. The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.
48. The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum progressive Mine Closure Plan.
49. The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface runoff. The selection of local species regulates local climate parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dump. The dump mass should be consolidated with the help of dozer/compactors thereby ensuring proper filling/leveling of dump mass. In critical areas, use of geo- textiles/ geo-membranes/clay liners/Bentonite etc. shall be undertaken for stabilization of the dump.
50. The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC
51. Garland drain, Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top soil/OB/Waste dumps to prevent runoff of water and flow of sediments directly into the water bodies (Nallah/River/Pond etc). The collected water should be utilized for watering the mine area roads, green belt development, plantation etc. The drain /sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season and maintained properly.

52. Garland drain and bund along with settling tank will be maintained in the boundary side and around dump to prevent siltation of low lying areas and in rush of water into the mine. The size of the drain will be as-

Details of Proposed Garland Drains		
Garland drain no.	Location of Garland drain	Size mL X mW X mD
PGD_1	BP_14 to BP_23	729X 0.5 X 1.0
PGD_2	BP-23 to BP-30	508 X 0.5 X 1.0
PGD_3	BP-30 to BP-1	508 X 0.5 X 1.0

53. All garland drains shall be connected to settling tanks through settling pits and settled water shall be used for dust suppression, green belt development and beneficiation plant. Regular de-silting of drains and pits should be carried out.
54. It is proposed to make 11 number of settling pits within the garland drain and proposed to connect drains to large settling tanks through these pits to avoid silt discharge from open ended drain. The size of the drain will be as-

Details of proposed settling pits		
Identified Drain With No.	No. of Settling Pit	Size of Settling Pit (M) W X L X D
PGD_1	PSP_1 to PSP_4	0.75x0.5x1.5
PGD_2	PSP_5 to PSP_7	0.75x0.5x1.5
PGD_2 & PGD_3	PSP_8	0.75x0.5x1.5
PGD_3	PSP_9 to PSP_11	0.75x0.5x1.5

03 numbers of settling tanks will be proposed in lease area. Details has been given in below:

Detail of proposed settling Tanks		
Settling tank no.	Location	Size
Settling tank no. 1	BP_22A	0.14haX 5.0mD
Settling tank no. 2	BP_31	0.41haX 5.0mD
Settling tank no. 3	BP_26	0.10haX 5.0mD

55. Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments of sediments/silt material. The sedimentation pits/sumps shall be constructed at the corners of the garland drains.
56. The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as pre the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.
57. The existing and proposed land use plan of the mine is as follows:

Items	Existing	SOM period (5 year)	Conceptual Period
Total lease area	24.288 ha		
Ultimate depth of mining	9m bgl	330m AMSL (30m bgl-opencast)	330m AMSL (30m bgl-opencast) 281m AMSL (79m bgl-underground)
Area under dumps	Nil	10.1429ha	Nil
Area under pits	0.4180ha	2.6792 ha (Opencast)	2.6792 ha (Opencast)

Infrastructure & Road	0.20ha	0.35ha	Nil
Mineral storage	Nil	Nil	Nil
Plantation	0.10ha	4.10ha	7.60ha
Un-worked area	23.57ha	6.7459ha	14.0088 ha
Total	24.288 ha	24.288 ha	24.288 ha
Water body	0.25ha	0.75ha	2.00 ha
Area to be reclaimed	Nil	Nil	0.50ha
Plantation			
Un-worked area plantation	0.10 (150 No.)	4.00ha (8000No)	7.60 ha (15150No.)
Backfilling area plantation	Nil	Nil	0.50ha (1000No.)
Bench slope plantation	Nil	Nil	Nil
Total area for plantation	0.10 (150 No.)	4.00ha (8000No)	8.10 ha (16150No.)

## H. Transportation

58. No Transportation of the minerals is allowed from the road passing through villages/habitations. PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling with also be done regularly. Vehicular emission shall be kept under control and regularly monitored. Project should obtain Pollution under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.
59. The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

## I. Green Belt

60. Peripheral plantation all around the project boundary shall be carried out using tall saplings of minimum 2 meters height of species which are fast growing with thick canopy cover preferably of perennial green nature. As proposed in the landscape plan & EMP a minimum of 16,150 (8.10 ha.) trees shall be planted in barrier zone, backfilled area and along the transportation route.
61. The Project Proponent shall develop greenbelt in 7.5 m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of green belt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.
62. The Project Proponent shall carryout plantation/afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc by planting the native species in consultation with the State Forest Department/Agriculture Department/Rural development department/Tribal Welfare Department/Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of



the trees should be around 2500 samplings per Hectare. Adequate budgetary provision shall be made for protection and care of tree.

63. The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun should be scrupulously guarded/protected against felling the plantation of such trees should be promoted.
64. The project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation a Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.
65. And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

## **J. Public hearing and human health issues**

66. The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking etc. The check-ups shall be undertaken once in six months and necessary remedial/preventive measures be taken. A status report on the same may be sent to MoEFCC Regional Office and DGMS on half-yearly basis.
67. The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV. Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking.
68. The proponent shall also create awareness and educate the nearby community and workers for sanitation, Personal Hygiene. Hand washing, not to defecate in open. Women Health and Hygiene. Hand washing, not to defecate in open. Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.
69. The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the test and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise investigations relevant to the exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist and Manganese (Mn) Estimation in Blood; For Inorganic Chromium-Fortnightly skin inspection of hands and forearms by a responsible person Except routine tests all test would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos. Hard Rock Mining, Silica, Gold, Kaolin, Aluminum Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray, Only conventional X-Ray will be accepted for record purpose and not the digital one) X-ray must meet ILO criteria (17 x 14 inches and of good quality) [for Manganese Miners only]

70. The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass index and it should stay between 18.5 – 24.9 (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities (c) At the end of their leaving job there should be no diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1). Forced Vital Capacity (FVC) and the ratio) unless they are smokers which has to be adjusted and the effect of age (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented) (e) they should not have developed any Persistent Back Pain. Neck pain and the movement of their hip Knee and other Joints should have normal range of movement (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having above indications.
71. The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
72. The Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.
73. The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

#### **K. Corporate Environment Responsibility (CER)**

74. The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M. No. 22-65/2017-IA.II(M) dated 01/5/2018 or as proposed by SEAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual and annual report of implementation of the same along with documentary proof viz. photography's. Purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.
75. Project Proponent shall keep the funds earmarked for environmental protection measures in a separate count and refrain from diverting the same for other purpose. The Year wise expenditure of such funds should be reported to the MoEFCC and its concerned Regional Office.
76. For Environment Management Plan PP has proposed Rs. 62.06 Lakhs as capital and Rs. 18.64 Lakhs as recurring cost for this project.
77. For this project PP has proposed Rs 6.0 Lakhs as Corporate Environment Responsibility (CER) for remaining project component.

#### **L. Miscellaneous**

78. The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEFCC.
79. The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
80. The project Proponent shall submit six monthly compliance report on the status of the implementation of the stipulated environmental safeguards to the MoEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

81. A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientist and Mining Engineers shall be appointed and submit a report to RO, MoEFCC.
82. The concerned Regional Office of the MoEFCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officer(s) by furnishing the requisite data/information/monitoring report.

#### **M. Standard Conditions**

1. Any addition of the mining area, change of Khasra numbers, enhancement of capacity, change in mining technology, modernization and scope of working shall again require prior environmental clearance as per EIA notification, 2006.
2. All activities / mitigative measures proposed by PP in Environmental Impact Assessment must be ensured.
3. All activities / mitigative measures proposed by PP in Environmental Management Plan and approved by SEAC must be ensured.
4. All parameters listed in Environmental Monitoring Plan approved by SEAC must be monitored at approved locations and frequencies.
5. Blast vibrations study shall be conducted and submitted to the Regional Office, MoEF, Gol, Bhopal and MP PCB **within six months**. The study shall also provide measures for prevention of blasting associated impact on nearby houses and agricultural fields.
6. Controlled blasting techniques with sequential drilling shall be adopted as per the guideline of Explosive Deptt.
7. Slope of the mining bench and ultimate pit limit shall be as per the mining scheme approved by Indian Bureau of Mines.
8. A final mine closure plan, along with details of Corpus Fund, shall be submitted to the Regional Office, MoEF, Gol, Bhopal and MP PCB within 5 years in advance of final mine closure for approval.
9. No change in the calendar plan including excavation, quantum of mineral and waste shall be made.
10. Mining will be carried out as per the approved mining plan. In case of any violation of mining plan, the Environmental Clearance given by SEIAA will stand cancelled.
11. Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.
12. The project proponent will ensure necessary protection measures around the mine pit, waste dumps and garland drain.
13. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Regional Office, MoEF, Gol, Bhopal and MP PCB on six monthly basis.
14. By the end of the lease period 33% of the area should be brought under plantation.
15. Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO / Agriculture Deptt. Herbs & shrubs shall also form a part of afforestation programme besides tree plantation. The company shall involve local people for plantation programme. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the Regional Office, MoEF, Gol, Bhopal and MP PCB every year.
16. Vehicles used for transportation of minerals and others shall have valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments.
17. Four ambient air quality-monitoring stations shall be established in the core zone as well as in the buffer zone for RSPM, SPM, SO<sub>2</sub>, NO<sub>x</sub> monitoring. Location of the stations should be decided based on the

meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board. The monitored data for criteria pollutants shall be regularly up-loaded and displayed on the company's website.

18. Data on ambient air quality (RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub>) should be regularly submitted to the Regional office, MoEF, GoI, Bhopal and the State Pollution Control Board / Central Pollution Control Board once in six months.
19. Ambient air quality at the boundary of the mine premises shall conform to the norms prescribed in MoEF notification no. GSR/826(E) dtd. 16.11.09.
20. Water spraying arrangement on haul roads, loading and unloading and at transfer points shall be provided and properly maintained. The dust emission shall be monitored regularly as per norms and records to be submitted to the Regional Office, MoEF, GoI, Bhopal and MP PCB regularly.
21. Measures shall be taken for control of noise levels below 75 dBA in the work environment. Workers engaged in operations of HEMM, etc., shall be provided with ear plugs / muffs and health records of the workers shall be maintained.
22. Rain water harvesting shall be undertaken to recharge the ground water source. Status of implementation shall be submitted to the Regional Office, MoEF, GoI, Bhopal and MP PCB **within six months** and thereafter every year from the next consequent year.
23. Regular monitoring of ground and surface water sources for level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year i.e. pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected shall be regularly sent to Regional Office, MoEF, GoI, Bhopal, MP PCB, Central Ground Water Authority and Regional Director, Central Ground Water Board.
24. The waste water from the mine shall be treated and chemically tested particularly for TDS to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time before discharging the same into natural environment. The oil and grease trap shall be installed for the effluents generated from the workshop, if any, before discharging into the natural stream. The discharged water from the tailing dam, if any shall be regularly monitored and report submitted to the Regional Office, Ministry of Environment & Forests, GoI, Bhopal, Central Pollution Control Board, and the State Pollution Control Board.
25. Hydro-geological study of the area shall be reviewed by the project proponent annually. In case adverse effect on ground water quality and quantity is observed mining shall be stopped and resumed only after mitigating steps to contain any adverse impact on ground water is implemented.
26. Occupational health check up for the workers including identification of work related health hazards, training on health effects on exposure to underground mining activities and hearing impairment if any, through authorized agencies shall be carried out and report should be submitted to MoEF, GoI, MPPCB. Awareness programme for workers on impact of mining on their health and precautionary measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures shall be conducted followed by follow up action wherever required. It should be made available for inspection whenever asked. Necessary funds for this also should be earmarked.
27. Project Proponent shall ensure appropriate arrangement for first aid, shelter and amenities like toilets, drinking water etc., for the mine workers.
28. All safety equipment such as air masks, gum boots, earplugs, helmets etc. shall be provided for mine worker as per provision and they shall also be imparted adequate training and information on safety and health aspects.
29. Commitment towards CSR have to be followed strictly.
30. Special measures shall be adopted to prevent the nearby settlements from the impacts of mining activities.

31. The Project Proponent shall inform to the Regional Office, MoEF, GoI, Bhopal and MP PCB regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work, if applicable.
32. The necessary funds as per mandate shall kept for environmental protective measures which should be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the Regional Office, MoEF, GoI, Bhopal and MP PCB.
33. The Regional Office, MoEF, GoI, Bhopal and MP PCB shall monitor compliance of the stipulated conditions. A complete set of documents including Environment Impact Assessment Report, Environmental Management Plan, should be given to Regional Office, MoEF, GoI, Bhopal and MP PCB.
34. A copy of the environmental clearance shall be submitted by the Project Proponent to the Heads of the Local Bodies, Panchayat and Municipal Bodies as applicable in addition to the associated Government Departments responsible for controlling the proposed projects who in turn has to display the same for 30 days from the date of receipt.
35. The Project Proponent shall advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the State Level Environment Impact Assessment Authority (SEIAA) website at [www.mpseiaa.nic.in](http://www.mpseiaa.nic.in) and a copy of the same shall be forwarded to the Regional Office, MoEF, GoI, Bhopal.
36. The project proponent has to strictly follow directions/guideline issued by the MoEF, GoI, CPCB and other Govt. agencies from time to time.
37. Action plan with respect to suggestion/improvement and recommendations made and agreed during public hearing consultation shall be submitted to the Regional Office, MoEF, GoI, Bhopal, MP PCB within six months.
38. The Project Proponent has to submit half yearly compliance report of the stipulated prior environmental clearance terms and conditions in hard and soft copy to the Regulatory Authority on 1st June and 1st December of each calendar year.
39. The SEIAA of M.P. reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
40. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.
41. The Ministry or any other competent authority may alter/modify the conditions or stipulate any further condition in the interest of environment protection.
42. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
43. Any appeal against this prior environmental clearance shall lie with the Green Tribunal, if necessary, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
44. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
45. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral

parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

46. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the Regional Office of MoEF.

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Endt No. / SEIAA/20

Dated: 14.10.20

dc

(Tanvi Sundriyal)  
Member Secretary

Copy to:-

1. Principal Secretary, Department of Environment, Government of Madhya Pradesh, Mantralaya, Bhopal.
2. Secretary, SEAC, Research and Development Wing Madhya Pradesh Pollution Control Board, Paryavaran Parisar, E-5, Arera Colony Bhopal-4620 16
3. Member Secretary, Madhya Pradesh Pollution Control Board, Paryavaran Parisar, E-5, Arera Colony, Bhopal-462016
4. Collector, District Balaghat (M. P.)
5. Divisional Forest Officer, District Balaghat (M. P.)
6. I.A. Division, Monitoring Cell, MoEF& CC, Gol, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi- 110 003.
7. Director (S), Regional office of the MOEF, Western Region, Kendriya Paryavaran Bhawan, Link Road No. 3 Ravi Shankar Nagar, Bhopal-462016.
8. Director, Geology & Mining, Madhya Pradesh, 29-A, Khanij Bhawan, Arera Hills, Bhopal – 462002.
9. District Mining Officer, District Balaghat (M. P.)
10. DEO, SEIAA, for update on website.
11. Guard file.

(Dr. Sanjeev Sachdev)  
Officer-in-Charge

dc