

F.No. J-11015/84/2018-IA. II (M)

Government of India

Ministry of Environment, Forest and Climate Change

IA Division



3rd Floor, Vayu Block,
Indira Paryavaran Bhawan,
Jor Bagh Road, Aliganj,
New Delhi-110003

Dated: 13th April, 2020

To,

M/s Hindustan Zinc Ltd
Rajpura Dariba Mines
Dist: Rajsamand-313211,
Rajasthan

Subject: Expansion in production of Lead-Zinc Ore from 1.08 million TPA to 2.0 million TPA (Total Excavation 2.48 million TPA) & Lead-Zinc Ore Beneficiation from 1.2 million TPA to 2.5 million TPA from Rajpura Dariba Underground Mine (Mining lease area 1142.2106 & ML No. 166/2008), Located at Tehsil Relmagra, Distt- Rajsamand, Rajasthan, by M/s Hindustan Zinc Ltd- EC regarding

Ref: Online application No: IA/RJ/MIN/86877/2018

Sir,

This has reference to your online application for Environmental Clearance (EC) for expansion of Rajpura Dariba Lead - Zinc underground mine from 1.08 million TPA to 2.0 million TPA and waste rock generation of 0.48 million TPA (Total Excavation will be 2.48 million TPA). After proposed expansion, production capacity of Beneficiation will be 2.5 million TPA, of which 2.0 million TPA ore will be beneficiated from Rajpura Dariba Mine and 0.5 million TPA from other mines of Hindustan Zinc Ltd. The mine is located at Tehsil Relmagra, District Rajsamand, Rajasthan. The Mining Lease area falls in Survey of India Topo-sheet No. 45K/4 and 45L/I and lies between Latitudes 24°55'40.8" N - 24°57'49.0" N and Longitudes 74°06'57.7" E-74°08'41.4" E.

2. The project falls under Schedule 1(a) of mining & 2(b) beneficiation and is a **Category- "A"** project as per EIA notification 14th September 2006 (as amended) as the mining lease is more than 100 Ha. PP vide proposal No IA/RJ/MIN/75956/2018 applied online for **grant of ToR** 06.07.2018 and submitted Form-1 and Pre-Feasibility Report. The proposal was considered in EAC meeting held on August 23-24, 2018 wherein the Committee recommended for grant of ToR. ToR was issued vide Lr. No. J-11015/84/2018. IA. II (M) dated 27th September, 2018.

3. The Project Proponent vide proposal No. IA/RJ/MIN/86877/2018 **applied online for grant of EC** on 07.01.2019 and submitted EIA/EMP Report after conducting public hearing and the proposal was placed in EAC meeting held during January, 22-23, 2019 wherein the Committee deferred the proposal for want of requisite information. PP submitted the information on 18.11.2019 and the proposal was placed in EAC meeting held during 19-20 December, 2019, wherein the EAC recommended the proposal for grant of EC.

4. PP reported that the **Mining lease** was granted on 31.03.1970 and registered on 30.05.1970 for a period of 20 years which was subsequently renewed on 16.09.1993 and 12.06.2012 for additional 20 years by Government of Rajasthan under the MMDR 1957. Rajpura Dariba is an underground mine with beneficiation facilities. The commencement of ore beneficiation took place at RD mine in the year 1982. The PP submitted LR No खअ/राज-11/सीसी/मेजेर/एमएल-166-2008/2481 dated 30.10.2012 issued by State Govt. as per which validity of the mining lease is up to 29th May 2030. The PP submitted letter No dated 1.12.2007 issued by Mining Officer Rajasmand wherein it has mentioned that proposed mining lease does not come under Aravalli Range.

5. PP submitted that Modified **Mining Plan** with progressive Mine Closure Plan has been approved vide letter no. 584(4) (3) (1705)/ 2017-RCM-AJM dated 26.09.2017 under MCDR, 1988/MCR 1960 as per which the method of mining shall be Underground Mechanized Mining with drilling & blasting and by adopting Blast Hole Stopping (BHS) & (Vertical Retreat Method (VRM) with filling. PP submitted that existing working depth of working is varying from 300m in north lode to 620m in main lode. The mine can be approached by 3 accesses from surface viz. i) Main Shaft (Surface to -92mRL) having total depth 611m (501 to -110mRL) and working depth 593m (501 to -92mRL), ii) Auxiliary Shaft (Surface to 0 mRL) having total depth 509mRL (501 to -8mRL) and working depth 501m (501 to 0 mRL) and iii) Ramp having total Depth 658m (501 to -157mRL). PP submitted that as on 1.04.2017 the Total Resource is 59.24 million tones and mineable resource is 30.94 million tonne.

6. PP submitted that total ROM will be 2.48 MTPA out of which 2.0 MTPA (remaining 0.48 MTPA is waste) from this mines and 0.5 MTPA from other mines go for treatment in beneficiation plant. Out of the 2.5 MTPA Ore, 0.29 MTPA will be concentrate, 1.375 MTPA is tailing which will be backfilled and 0.84 MTPA will go to trailing dam. Out of 0.48 MTPA of **waste**, 0.46 MTPA will go to underground voids, 0.02 to waste dumps and 0.02 MTPA for increasing the height of tailing dam. PP vide its letter dated UH(RDM)/Env/2019 dated 19.12.2019 submitted an undertaking on a non-judicial stamp paper bearing No IN-DL98689894474614R dated 19.12.2019 wherein it has mentioned that "Rajpura Dariba underground mine waste rock will be disposed/utilised in the height raising of tailing dam only within the mine lease area. No mine waste rock will be disposed outside the mine lease." PP submitted that total waste generation over the life of mine will be 42.0 Lakh m³ out of which 40.0 Lakh m³ will be disposed in underground voids and remaining 2.0 lakh m³ will be disposed externally. PP submitted that waste to be utilized for construction of tailing dam will be 2.0 Lakh m³. PP submitted that existing area of the waste dump is 3 ha and additional 2 ha will be required for waste dumping. Thus, the total area under

waste dump will be 5 Ha. PP submitted that the dump will be developed in 3 benches of 7-meter high. Therefore, the total height of the dump will be maximum 21 meters (from base level of 495 mRL i.e. up to 516 m RL). The overall slope of the dump will be 35°. Total quantity of the waste material in waste dump will be 13.64 Lakh Tonne. PP informed that as protective measures, a) overall slope angle of waste dump is maintained at less than angle of repose of broken material, b) retaining wall is maintained around the waste dump to prevent roll down boulders, c) garland drain of 1m x 1m around waste dump is excavated for collecting the rain water into the storm water pit, and d) plantation shall be done in the inactive area of the waste dump to provide additional stability.

7. PP submitted that Indian Institute of Sciences (IISc), Bangalore and M/s Golder (Canada) have been engaged for design, inputs, vetting during construction and periodical audits of **Tailing Storage Facility**. Hazard identification & Risk assessment of tailing dam has been conducted and being reviewed periodically. PP submitted that tailing is disposed in tailing dam in slurry form. Solid particles of the tailings are settled, supernatant water is collected and recycled back in the process through reclamation system. Zero Liquid Discharge is maintained from tailing dam. National Environmental Research Institute (NEERI), Nagpur has been engaged for assessment of leaching potential from tailing. PP also submitted that as per assessment of leaching potential of the tailings revealed that various chemicals constituents and heavy metals present in the tailing are not amenable to leaching under worst case scenario as their concentration in leachate did not exceed the stipulated regulatory limits. PP submitted that to strengthen tailing disposal the recommendation of NEERI viz. a) switching over to dry tailing disposal practices and b) appropriate treatment of recycled tailing dam water before reusing it in the process to mitigate the concentration built up of some water quality parameters, shall be implemented.

8. PP submitted that the **water** is being drawn from the Matrikundia dam in Banas River through a 22 km pipeline up to the plant. It is stated that the plant is being operated since last two years on 100% recycle water and the same is proposed in future also. Fresh water is used only for drinking purpose which is supplied for industrial, colony and nearby villages. For 2.0 MTPA mining & existing beneficiation capacities, additional water of 2200 m³ /day is required for proposed expansion over existing 5800 m³ /day requirement. Thus, the total water requirement shall be 8000 m³/day. Mine dewatering due to intersection will also be consumed in the process. The main source of water will be from Sewage Treatment Plant at Udaipur, Mansi Wakal, and Matrikundia Dam. The PP also submitted the NOC obtained vide Letter No 21-4(315)/WR/CGWA/2008-212 dated 14.07.2009 for mine dewatering wherein it has inter-alia mentioned that "the firm may dewater accumulated ground water in mining pits @ 446.50 m³/day due to seepage and intersection of water table". This approval was valid till 2 years from date of issuance of letter i.e. up to 13.07.2011. The PP also submitted renewal of NOC obtained vide LR No 21-4(315)/WR/CGWA/2008-1905 dated 16.11.2017 wherein the permission for dewater the accumulated ground water in mining pits @ 446.50 m³/day due to seepage and intersection of water table was provided. This NOC is valid for 3 years i.e. up to 15.11.2020. The PP has also submitted the detailed Hydrogeological Study Conducted by Hydro Geosurvey Consultant Pvt Ltd.

9. PP submitted that approximately 190000 **saplings** has already been planted. PP submitted that during 2018-19 to 2022-23 total 56030 saplings will be planted and it is proposed to plant 50000 (@ 10000 per year from 2018-19 to 2022-23) more saplings for gap filling. PP submitted that out of total acquired land, 34.28% is already under plantation. PP submitted a map showing the plantation to be carried out during 2018-19 to 2022-23; 2023-24 to 2027-28 and 2028-29 to 2029-30. PP also provide the latitude & longitude wherein the plantation can be carried out within the mining lease and outside the mining lease during 2018-19 to 2022-23, total 56030 saplings will be planted over 43.1 Ha area (cumulative plantation 246030 on 233.1 Ha), during 2023-24 to 2027-28 total 10660 saplings will be planted on 8.2 Ha area (cumulative plantation 256690 on 241.3 Ha)]. PP submitted that for protection of plantation a) fencing will be provided around the area where mass plantation has been proposed. These fencing will comprise of 1.5 m high and 0.60 m thick stone wall. This will help in preventing cattle from entering in to such area and will protect unauthorized entry of out-side person and fire. Due care will be taken to protect plantation as well as the fencing by the guards to be appointed for supervision, b) During dry spell, water is provided /sprinkled by water tankers provided with 5-10 m long 2" diameter hose pipes, c) Initially fertilizer/ manure will be given to the pits before and after plantation. Thereafter, manuring will be continued on reduced scale till the plant attains growth of 2 to 3 m height. Provision of utilizing bio-manure will also be made within the lease area and d) Man power will be engaged in mulching the soil frequently along with removal of weeds. PP submitted that after expansion budget for plantation/green belt development with drip irrigation system will be Rs 1200.0 Lakh (Capital) & Rs 20.0 Lakh (recurring).

10. PP reported that the lease area does not include any **forest lands** and submitted Lr No पत्र () सर्वे/उक्सं/2018-19/7528 dated 24.09.2018 issued by DFO (Wildlife), Rajsamand. PP also submitted that there is no protected area such as National Park of Wildlife Sanctuary within 10 KM of the mining lease and submitted Lr. No पत्र () सर्वे/उक्सं/2018-19/3424 dated 23.08.2017 issued by DFO (Wildlife), Rajsamand wherein it has mentioned that there is no National Park, Wildlife Sanctuary, Ramsar Site, Tiger/Elephant Reserve within core and buffer zone of the mining lease.

11. PP initially submitted the authenticated list of flora & fauna present in the within 10 KM of the project site as per which there are 8 **schedule- 1 species** viz. Indian Peafowl, Indian Grey Horn Bill, Black Shoulder Kite, White Eyed Buzzard, Indian Monitor Lizard, Indian Flap shell Turtle, Indian Python and Indian Leopard present in the study area. PP submitted the Wildlife Conservation Plan (WCL) prepared for the protection of the above mentioned Schedule-1 Species. The amount proposed under WCL is 126.0 Lakh for five years. As per recommendation from DCF - Wildlife, Rajsamand, conservation plan has been revised and submitted to CCF and DCF Wildlife office vide letter no RDC/Env/CCF/2019 dated 28.03.2019. The revised Conservation plan has been made till validity of Mine Lease. i.e. 2030. CCF has forwarded the proposal to APCCF and Chief Wildlife Warden Rajasthan vide letter no. 1063 dated 05.04.2019. Further, as per instruction of Chief Wildlife Warden (CWLW), Rajasthan vide letter no. 6567 dated 31.05.2019, the Wildlife Conservation Plan has been revised (as per latest guideline) (for 6 schedule-1 species viz. Indian Peafowl, Indian Monitor Lizard, Indian Flap shell Turtle, Indian Python , Eurasian Spoonbill and Indian Leopard) and submitted to DCF - Wildlife,

Rajsamand vide letter no. UH(RDM)/Env/DCF/2019 dated 27.08.2019. The budget earmarked for the same is Rs 6.6 crores till validity of Mine Lease. i.e. 2030; which include habitat improvement & mitigative measures, Support to Forest Department for monitoring, rescue & rehabilitation of wildlife and training & awareness etc. PP also submitted that the conservation plan has been in principally approved by Chief Wildlife Warden, Rajasthan vide letter No. F11 (676)/Vikas-II/MuvJiPra/2019-20/9491 dated 9.12.2019.

12. PP reported that the baseline data on micrometeorology, Air, Water, Noise & Soil has been generated during Summer Season (March, 2017 - May, 2017). The monitoring results of ambient air for SO₂, NO₂, PM₁₀ and PM_{2.5} are within the prescribed NAAQS Standards. The water quality of ground water samples was found to be within the prescribed IS: 10500 norms except some locations. The monitored ambient noise levels were within the limit values for Industrial & Residential areas. The results of the soil samples show that the soil is sandy loamy in texture and neutral in nature. The nutrient and organic contents are medium and the soil is normally fertile. PP submitted that noise monitoring has been conducted as per guidelines of baseline environmental monitoring i.e. once in season. PP submitted the air quality modelling in control and without control scenario considering total excavation and the resultant concentration is well within the prescribed NASSQ limits.

13. PP reported that Public hearing for the project was conducted on 29.10.2018 at 11:00 AM. At Rajpura Dariba Mine Complex, Tehsil: Relmagra, Dist: Rajsamand, Rajasthan. The public hearing was chaired by Shri Shyam Lal Gujar, District collector & District Magistrate, Rajsamand. The advertisement for public hearing was published in 'Rajasthan Patrika' (28.09.2018) and 'Times of India' (28.09.2018). The Committee deliberated on the issues raised during the public F. No. J-11015/84/2018-IA. II (M) hearing and the major issues raised by the local people were related to assistance in farming, drinking water supply, medical facilities, employment, roads, work to small contractors, education, crop compensation, pollution, employment to widows, discharge of chemical in pond, Gaushala and water facility for animals, CSR activities to be extended etc. PP submitted that majority of verbal and written communication submitted during Public Hearing by various stakeholders has been complied and submitted to the Ministry. Action Plan of the written submission during the PH has been prepared which include the same demand like health, hygiene, water, education, infrastructure development, environment, and on priority jobs etc. PP submitted that all the commitment made during PH have been incorporated in budget for EMP & CER. The budget earmarked for CER is Rs 16.5 Crores, EMP is Rs 110.50 Crores (Capital) & Rs 6.95 Crores, occupational health surveillance shall be Rs 204 Lakh and disaster management plan is Rs. 2.29 crore (refer MoM dated 19-20 December 2019 for details).

14. PP submitted that **Certified EC Compliance Report** has been issued from Regional office of MoEF & CC vide letter no. IV/Env/R/Ind-115/758/2009/503 dated 26.11.2018 against stipulated conditions of the Environmental Clearance vide letter no-J-11015/380/2008-IA. II (M) dated 04.11.2009 with some minor non-compliance observed/ partially complied conditions. Point wise compliance status has been submitted to MoEF&CC vide letter no. HZL/DSC/ENV/EC/2018/01 dated 04.12.2018 and all desired information/ documents have been submitted for partially complied conditions. PP

submitted that two additional conditions stipulated vide letter no. J-110015/380/2008-IA II (M) dated 26.07.2018 are standard condition of the prescribed ToR, as per MoEF Office Memorandum No. F: 3-50/2017-IA.III (Pt.), dated 30.05.2018, on the judgment of Hon'ble Supreme Court, dated the 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014. RD Mine is determined to comply with all the statutory requirements and compliance to judgement of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. An affidavit in this regard has been submitted to MoEF&CC. PP submitted letter from Rajasthan pollution board vide letter no F12 (Gen-107) RSPCB/Gr. Mines/ 873 dated 20.08.2019 confirming that production is well within the CTO capacity and also the letter from DMG issued by appropriate authority vide Letter No KHA/Raj-II/CC-I/2019/2918 dated 10.10.2019 confirming that there are no dues against the company. Committee observed that additional EC/ToR conditions are for compliance of Common Cause Judgment dated 2.08.2019. The Ministry already informed endorsed the copy of EC/ToR to State Government and also vide its letter No L-11011/79/2019-IA. II(M) dated 9/7/2019 requested State Government viz. RSPCB & Mining Department to take necessary action for compliance of direction of Hon'ble Supreme Court. The Rajasthan State Pollution Control Board in its letter no F12 (Gen-107) RSPCB/Gr. Mines/ 873 dated 20.08.2019 inter-alia mentioned that the total production in year 2002-03 is well within the total CTO capacity and as far as the period between December 2003 to 2008 is concerned, the PP has not exceeded the consented production capacity as allowed in CTO. PP also submitted a letter No KHA/Raj-II/CC-I/2019/2918 dated 10.10.2019 and letter No KHA/Raj-II/CC-I/2019/3023 dated 18.11.2019 issued by Mining Engineer, Rajsamand Section II, Department of Mining & Geology, Rajasthan wherein it has mentioned that there is no investigation or show cause notice pending under the Common Cause Order of Supreme Court and Section 21(5) with respect to ML No. 2/1989 (new -166/2008) and there is no dues pending under section 21(5). **The Committee after due consideration of the documents submitted by PP is of the opinion that PP has complied the necessary requirements as there is no dues pending before DMG-Rajasthan and also RSPCB has confirm the production is within CTO capacity.**

14 15. PP submitted the legal undertaking dated 10.02.2019 from consultant wherein it has inter-alia mentioned that the details and data presented in the proposal submitted to MoEF&CC, Delhi are factually correct and prescribed ToR has been complied with. PP also submitted an undertaking wherein it has mentioned that information presented in the report is factually correct and HZL owns the content of the report. The Consultant Gaurang Environmental Solution Pvt. Ltd. has submitted the disclosure of the consultant engaged and also confirmed that the consultant organization shall be fully accountable for any misleading information mentioned in this statement.

16. Project Proponent submitted that the total project cost shall be Rs 960 Crore (Capital) and recurring cost which varies around Rs 70621/tonne of MIC to Rs 75683/tonne of MIC. PP submitted that total employment will be provided to 1083 persons

[251 direct & 830 indirect]. The Committee is of the view that PP shall give preference to eligible locals/ nearby villagers in employment.

17. Based on the discussion held and documents submitted the Committee recommended the proposal of M/s Hindustan Zinc Ltd for expansion in production of Lead-Zinc Ore from 1.08 million TPA to 2.0 million TPA (Total Excavation 2.48 million TPA) & Lead-Zinc Ore Beneficiation from 1.2 million TPA to 2.5 million TPA from Rajpura Dariba Underground Mine (Mining lease area 1142.2106 & ML No. 166/2008), Located at Tehsil Relmagra, Distt- Rajsamand, Rajasthan with specific conditions (SI. No 19 A) in addition to Standard EC Conditions (SI. No 19 B) as per Ministry's O.M. No. 22-34/2018-IA.III dated 08.01.2019 subject to submission of application for revised conservation plan for remaining schedule-1 species and proof of submission of the same to CWLW.

18. With respect to observation of EAC, regarding submission of conservation plan for remaining schedule-1 species the PP vide its letter dated 12.02.2020 submitted the letter No. F/DCFWL//2020/884 dated 7.02.2020 issued by Dy. Conservator of Forest (Wildlife) wherein it has mentioned that "*Schedule-1 species like Indian Gazelle/chinkara (Gazella Gazelle), Four horned antelope (Tetraacerus quadricornis), wolf (Canis lupus), Margh Crocodile (Crocodylus palustris), European Bat (Pipistrellous pigemous), Gangetic Soft-shell turtle (Gangetic Species), Twangy Eagle (Aquila repax) etc. are not found within 10 KM radius of Rajpura Dariba Mines, Hindustan Zinc Ltd (ML No 166/2008), since there is no any wetland or forest land falls in this area.*"

19. The Ministry of Environment, Forest & Climate Change has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto and hereby accords the Environmental Clearance under the provisions thereof to the above mentioned proposal of M/s Hindustan Zinc Ltd for expansion in production of Lead-Zinc Ore from 1.08 million TPA to 2.0 million TPA (Total Excavation 2.48 million TPA) & Lead-Zinc Ore Beneficiation from 1.2 million TPA to 2.5 million TPA from Rajpura Dariba Underground Mine (Mining lease area 1142.2106 & ML No. 166/2008), Located at Tehsil Relmagra, Distt- Rajsamand, Rajasthan subject to compliance of the terms & conditions and the environmental safeguards mentioned below: -

A. Specific Conditions:

- 1) NOC from CGWA obtained vide LR No 21-4(315)/WR/CGWA/2008-1905 dated 16.11.2017 wherein the permission for dewater the accumulated ground water in mining pits @ 446.50 m³/day due to seepage and intersection of water table was provided. This NOC is valid for 3 years i.e. up to 15.11.2020. Beyond 15.11.2020 PP shall use the ground water only after obtaining approval from CGWA and State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) for expansion proposal after 15.11.2020, till the project proponent obtains such permission. Zero Liquid Discharge is to be maintained from tailing dam. PP shall not use surface water without obtaining permission from the concerned authorities. Plant should be operated with 100% recycle water and fresh water

shall be used only for drinking purpose which is supplied for industrial, colony and nearby villages.

- 2) Out of 0.48 MTPA of waste, 0.46 MTPA shall be used to fill underground voids, 0.02 to waste dumps and not more than 0.02 MTPA shall be used for increasing the height of tailing dam. Waste should not be transported outside the mining lease area and shall be utilised within the mining lease area. The dump shall be developed in 3 benches of 7-meter high. Total height of the dump shall not be more than 21 meters (from base level of 495 mRL i.e. up to 516 m RL). The overall slope of the dump shall not be more than 35°. Total quantity of the waste material in waste dump shall not be more than 3.64 Lakh Tonne. Protective measures as proposed viz. a) overall slope angle of waste dump is maintained at less than angle of repose of broken material, b) retaining wall is maintained around the waste dump to prevent roll down boulders, c) garland drain of 1m x 1m around waste dump is excavated for collecting the rain water into the storm water pit, and d) plantation shall be done in the inactive area of the waste dump to provide additional stability etc. shall be implemented for the stability of the waste dump. The area of dump yard should not be more than 5 Ha.
- 3) Budget earmarked for plantation/green belt development with drip irrigation system after expansion is Rs 1200.0 Lakh (Capital) & Rs 20.0 Lakh (recurring). Plantation proposed within & outside the mine lease area lease during 2018-19 to 2022-23 total 56030 saplings will be planted on 43.1 Ha area (cumulative plantation 246030 on 233.1 Ha), during 2023-24 to 2027-2028 total 10660 saplings will be planted on 8.2 Ha area (cumulative plantation 256690 on 241.3 Ha). PP shall implement the protection proposed for the survival of plantation. PP shall engage the expert agency to increase the plantation density to at least 2500 saplings/ha. PP shall develop an alternative grazing in lieu of grazing land if already used by the PP for mining activity and take NOC from the concerned authorities for use of grazing land for mining purpose. Growth of each plant needs to be monitored and record should be maintained, the record should also be maintained for no of species planted, type of species planted, survival rate etc. The budget earmarked for plantation shall be kept in separate bank account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 4) Approval of Revised Conservation Plan for Schedule-1 species viz. Indian Peafowl, Indian Grey Horn Bill, Black Shoulder Kite, White Eyed Buzzard, Indian Monitor Lizard, Indian Flapshell Turtle/ Indian Mud Turtle, Indian Python, Indian

Leopard, Indian Gazelle, Four horned antelope, wolf, Margh Crocodile, and Panthera Pardus needs to be obtained. PP shall sign the MoU with state government for implementation of conservation plan. PP shall deposit the amount proposed for conservation plan to State Government as per demand raised by them from time to time. PP shall report the status of payment and implementation of conservation plan to Regional Office, MoEF&CC annually.

- 5) Budget earmarked for CER activities is Rs 14.0 Crores which include Activity -1: Health, Hygiene & Water [a) Renovation & Renovation and upgradation of Govt. Hospital (CHC Mahenduriya) {Construction of additional wards, toilets, garden, mortuary, lighting, etc.}; Budget Rs. 100 Lakh; Time-line 1st year, b) Installation of High Capacity Community RO in 4 surrounding villages; {1500 Lts. Per hr capacity, auto TDS, real time data, 5000 storage, SS tank mounted vehicle to mobile ATM and water transfer. 24 * 7 chilled water supply – Railmagra 2 nos., Sindesarkalan, Gawardih}; Budget Rs. 200 Lakh @ Rs 100 Lakh/year; Time-line 2-year. c) Construction of overhead tank and pipe line in village for uninterrupted water supply {20,000 Lts. Overhead tank at Kothdi}; Budget 300 Lakh; Time-line 1st, 2nd & 3rd year], Activity -2: Education [a) Holistic development of 3 government schools {Additional classrooms, separate toilets, lab, computer classes, boundary wall & field development at Kotdi, Anjana & Shivpura} Budget Rs. 150 Lakh @ Rs 50 Lakh/year; Time-line 3-year, b) Renovation of 20 old Anganwadis {Repair & maintenance work, painting, roof treatment, boundary, electricity, etc.} Budget 200 Lakh @ Rs 100 Lakh/year; Time-line 2nd & 3rd Year.] Activity -3: Infrastructure Development [a) Construction of Check Dam {Construction of check dam at Pipawas} Budget Rs. 100 Lakh; Time-line 1st year. b) Community centres {At Naya Dariba, Anjana, Mahenduriya} Budget 120 Lakh; Time-line 1st year, c) Construction of stadium & playgrounds {Kabra & Gawardih} Budget 80 Lakh; Time-line 2nd year, d) Solar Lights {300 lights in surrounding 10 villages} Budget 100 Lakh; Time-line 1st year, e) Solar pump water systems {10 HP motor with Solar panels in 5 surrounding villages} Budget 150 Lakh & 100 Lakh, Time-line 2nd & 3rd year]. In addition to above Rs 2.5 Crore shall be spent on i) to provide sanitary vending machines in Govt Girls Schools, Village Govt Health Centres and SHG Groups, ii) facilities to under privileged group for treatment of critical diseases like cancer/heart surgery, kidney/liver failure, etc. in nearby village, iii) to provide online library in Govt School for referring course syllabus, employment coaching exams etc. and iv) scholarship to meritorious/ under privileged youth for higher education. In case the amount proposed under CER is left unspent than the same should not be diverted and kept for CER activities beyond 3rd year. At the end of life of mine if any amount remains unspent than the same should be spent in consultation with local administrations for the development of nearby villages. The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement

and details of implementation of CER activities along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, photographs & Geo-location of the infrastructures/facilities developed, etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 6) Budget earmarked for Occupational Health Surveillance Plan shall be Rs 204 Lakh which includes 1) IME Budget @ 2500 per person (Rs 25 Lakh for 2019-20, Rs 6.25 for 2020-21, Rs 2.5 Lakh/annum from 2021-22 to 2030-31), 2) IME Budget @ 2500 per person (Rs 5 Lakh for 2019-20, Rs 7 Lakh/annum from 2020-21 to 2030-31), 3) PPEs @ Rs.5000 per person (Rs 100 Lakh for 2019-20, Rs 62.5 Lakh/annum from 2020-21 to 2030-31), 4) Occupational Hygiene (Rs 18.5 Lakh/annum from 2019-20 to 2030-31), 5) Quantitative & Qualitative Hygiene Survey (Rs 53 Lakh for 2019-20, Rs 5 Lakh/annum from 2020-21 to 2030-31), and 6) AMC of OH Software (Rs 2 Lakh/annum from 2019-20 to 2030-31). The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of occupational health plan along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged for implementation of occupational health plan to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 7) Disaster Management Plan proposed shall be implemented scrupulously. Budget allocations for the Emergency preparedness is prepared & submitted. Capital & recurring expenditure is around Rs. 2.29 crore which includes 1) Rs. 0.84 Cr. for Rescue Apparatus 2) Rs. 0.35 Cr. for Underground Ambulance, 3) Rs. 0.35 Cr. for Underground Rescue Van, 4) Rs. 0.15 Cr. for Vehicle for surface movement, 5) Rs. 0.50 Cr. for Fire tendering equipment and 6) Rs. 0.10 Cr. for Structure for Work @ Height. The recurring budget proposed is 1.53 Cr. which includes 1) Rs. 0.05 Cr. for RRRT Center 2) Rs. 0.22 Cr. for Apparatus, Calibration & Maint. , 3) Rs. 0.78 Cr. for RTPs & Trainings, 4) Rs. 0.05 Cr. for RRRT Competition, 5) Rs. 0.14 Cr. for Firefighting organization, 6) Rs. 0.24 Cr. for Refuge Chamber & Self-Rescuer and 7) Rs. 0.05 Cr. for Ambulance & Rescue Van. The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of Disaster Management Plan along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged for implementation of Disaster Management Plan to the Regional

Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 8) Budget earmarked for Environmental Management Plan (EMP) is Rs shall be Rs 110.50 Crores (Capital) & Rs 6.95 Crores (Recurring) which include [Dust Suppression System / Dust Extraction System installation with dust monitoring sensor (opacity meter) at chimney sampling point (COSP) Rs 1.2 Crores (Capital) & 1.5 Crores (Recurring), timeline 1 year; Tailing Dam management/ Dry Tailing Disposal Rs 26.20 Crores (Capital) & 1.96 Crores (Recurring), timeline 2 years; Tailing thickener Rs 0.5 Crores (Capital) & Rs 0.2 Crores (Recurring), timeline ; Surface water sprinkler Rs 0.80 Crores (Capital) & Rs 0.1 Crores (Recurring), timeline 1 year; Mechanical road sweeper Rs 0.80 Crores (Capital) & ~ 0.1 Crores (Recurring), timeline 1 year; Ventilation System Rs 16.6 Crores (Capital) & Rs 1.0 Crores (Recurring), timeline 2 years; Rainwater harvesting measures/ Deepening of existing Village Tanks 30.0 Crores (Capital) & 0.11 Crores (Recurring), timeline 3 years; Plantation/Green belt development with drip irrigation system 12.0 Crores (Capital) & 0.2 Crores (Recurring), timeline 10 years; Automation in Environment Monitoring (CAAQMs) 21.0 Crores (Capital) & 0.2 Crores (Recurring), timeline 1 year; Construction of Garland drain and silt settling tank and recycle system for waste dump management 0.3 Crores (Capital) & 0.1 Crores (Recurring), timeline 2 year; Schedule-I fauna conservation plan cost 6.60 Crores (Capital) & 0.01 Crores (Recurring), timeline 2 year; Installation of Oil grease trap system & Sewage treatment plant, installation with display of COD,BOD ,TDS,PH display at main gate entrance 18.0 Crores (Capital) & 0.2 Crores (Recurring), timeline 18 months; Water hydrant system 0.7 Crores(Capital) & 0.10 Crores (Recurring), timeline 18 months; High density/ Paste Fill 10.40 Crores (Capital) & 1.1 Crores (Recurring); Hazardous waste storage facility 0.5 Crores (Capital) & 0.0 Crores (Recurring), timeline 2 year; and Mobile Water tankers 0.3 Crores (Capital) & 0.05 Crores (Recurring), timeline 1 year] The amount (except occupational health) proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs& Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 9) PP shall engage an expert agency to identify the area which has maximum possibility to be get impacted due to mining & cement plant activity. After ascertaining the area of influence the PP shall annually monitor the crop productivity of the identified area. PP shall provide the crop insurance for

agricultural field falling in this area and in case of crop damage take immediate measure to mitigate the same and also ensure to pay crop loss compensation.

- 10) In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

B: Standard Conditions: (As Ministry's O.M No 22-34/2018-IA.III dated 8.01.2019)

I. Statutory compliance

- 1) 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 other Court of Law, Common Cause Conditions as may be applicable.
- 2) 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.
- 3) 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 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.
- 4) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.
- 5) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.
- 6) 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.
- 7) The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & 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.

- 8) 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.
- 9) The Project Proponent shall follow the mitigation measures provided in MoEFCC's 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".
- 10) 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 for the project.
- 11) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
- 12) State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
- 13) The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.
- 14) 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 or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

II. Air quality monitoring and preservation

- 15) The Project Proponent shall install a minimum of 3 (three) online 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 front of the main Gate of the mine site.

- 16) 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. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

III. Water quality monitoring and preservation

- 1) 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.
- 2) 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 to 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.
- 3) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation 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.

- 4) 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 for 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 Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.
- 5) Quality of polluted 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 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
- 6) 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 Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.
- 7) 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.
- 8) 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.

IV. Noise and vibration monitoring and prevention

- 9) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
- 10) 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 operations. 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.
- 11) 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 it has been found that workers/ personals/ laborers are working without personal protective equipment.

V. Mining plan

- 12) 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, over burden, inter burden 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 to Short Term Permit (STP), Query license or any other name.
- 13) 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.
- 14) 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.

VI. Land reclamation

- 15) 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.
- 16) 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.
- 17) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.
- 18) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic 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 dumps. 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.
- 19) 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.
- 20) 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 run off 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 drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
- 21) 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/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.

- 22) 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 per 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.

VII. Transportation

- 23) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, 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 will also be done regularly. Vehicular emissions 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.
- 24) 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.

VIII. Green Belt

- 25) The Project Proponent shall develop greenbelt in 7.5m 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 greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

- 26) 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 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
- 27) 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 and plantation of such trees should be promoted.
- 28) 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.
- 29) 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.

IX. Public hearing and human health issues

- 30) 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.
- 31) 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. 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 (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.

- 32) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead 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 tests 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, Aluminium, 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 purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).
- 33) 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.
- 34) 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.
- 35) 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.

- 36) 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.

X. Corporate Environment Responsibility (CER)

- 37) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.
- 38) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEFCC and its concerned Regional Office.

XI. Miscellaneous

- 39) 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.
- 40) 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.
- 41) The Project Proponent shall submit six monthly compliance reports 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.
- 42) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEFCC.

43) 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 reports.

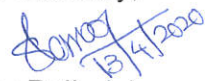
20. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

21. 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.

22. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.

23. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Yours faithfully,



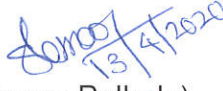
(Sharath Kumar Pallerla)
Director/Scientist 'F'

Copy to:

- 1). **The Secretary**, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi
- 2). **The Secretary**, Department of Mines & Geology, Government of Rajasthan, Secretariat, Jaipur
- 3). **The Secretary**, Department of Environment, Government of Rajasthan, Secretariat, Jaipur
- 4). **The Secretary**, Department of Forest, Government of Rajasthan, Secretariat, Jaipur
- 5). **The Chief Wildlife Warden** of the State Govt. of Rajasthan, Jaipur
- 6). **The Additional Principal Chief Conservator of Forests**, Central Region, Ministry of Environment, Forest and Climate Change, B-1/72, Sector-A, Aliganj, Lucknow-226020.
- 7). **The Chairman**, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- 8). **The Chairman**, Rajasthan State Pollution Control Board, 4, Institutional area, Jhalana,

Doongri, Jaipur

- 9). **The Member Secretary**, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- 10). **The Controller General**, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- 11). **The District Collector**, District- **Rajsamand**, Rajasthan.
- 12). **Guard File**
- 13). **MoEF&CC website (PARIVESH Portal)**


(Sharath Kumar Pallerla)
Director/Scientist 'F'

