



सत्यमेव जयते

File No.: SEAC/HR/2024/084
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment
Authority(SEIAA), HARYANA)



Dated 04/07/2024



To,

RIDDHI SIDDHI - KSM RESOURCES JV
KALALI AND KALYANA MINES, RIDHHI SIDHHI - KSM RESOURCES JV, VILLAGE
KALYANA, CHARKHI DADRI, BHIWANI, HARYANA - 127306, Kalyana, CHARKI DADRI,
HARYANA, Loharu Road, 127306
riddhisiddhiksmjv@gmail.com

Subject: **Environment Clearance for Expansion of Mining of Stone (Minor Mineral) & Associated Minerals with production capacity 80,00,000 TPA (58,00,000 TPA to 80,00,000 TPA) in 64.40 ha area at Khasra No. 223 min, 224 to 228 & 72 of Village-Kalali & Kalyana Tehsil, Dadri, District Charkhi Dadri Haryana**

Sir/Madam,

This has reference to your Proposal No. **SIA/HR/MIN/468866/2024 dated 10.04.2024** and subsequent letter dated **30.04.2024** for obtaining Environmental Clearance under category **1(a)** of EIA Notification dated 14.09.2006 along with submission of **due Scrutiny fee (as applicable) of 1,50,000/- vide DD No. 005007 dated 31.08.2023 (in compliance of Haryana Government, Environment & Climate Change, Department Notification No. DE&CCH/3060 dated 14.10.2021)**. 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., Form-1, Prefeasibility Report, EIA/EMP report based on the basis of Approved Terms of Reference and additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) constituted by MoEF& CC, GoI vide their Notification dated 21.02.2022, **in its 291st meeting held on 30.04.2024**

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24B0108HR5740317N
(ii) File No.	SEAC/HR/2024/084
(iii) Clearance Type	Fresh EC
(iv) Category	B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	Environment Clearance (EC) for Expansion of Mining of Stone (Minor Mineral) & Associated Minerals with production capacity 80,00,000 TPA (58,00,000 TPA to 80,00,000 TPA) in 64.40 ha

<p>(ix) Location of Project (District, State)</p> <p>(x) Issuing Authority</p> <p>(xii) Applicability of General Conditions</p>	<p>area at Khasra No. 223min, 224 to 228 & 72 of Kalali & Kalyana Village, Dadri Tehsil, Charkhi Dadri District of Haryana State</p> <p>CHARKI DADRI, HARYANA</p> <p>SEIAA</p> <p>No</p>
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3. It is inter-alia, noted that the project involves in the **Environment Clearance for Expansion of Mining of Stone (Minor Mineral) & Associated Minerals with production capacity 80,00,000 TPA (58,00,000 TPA to 80,00,000 TPA) in 64.40 ha area at Khasra No. 223 min, 224 to 228 & 72 of Kalali& Kalyana Village, Dadri Tehsil, Charkhi Dadri District of Haryana.**

4. The basic details of project are as under:

Table 1 – Basic Detail

Sr. No.	Particulars					
	Online Proposal no.	SIA/HR/MIN/468866/2024				
	Khasra No.	223min, 224 to 228, 72				
	Lease area	64.40 Ha of Gram panchayat Stony Waste Land				
	Total Production	80,00,000 TPA (Increase from 58,00,000 TPA to 80,00,000 TPA)				
	Geological Mineral Reserve	12,19,42,500 MT				
	Total Water demand	The required water will be supplied by private water tankers. Total water demand will be 36.1 KLD which concluded dust suppression (19.1 KLD), Plantation (13.9 KLD) and Domestic demand (3.0 KLD).				
	Life of Mine	14 years (18 years as per LoI in previous plan)				
	Location	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Longitude</th> <th style="text-align: center;">Latitude</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">28⁰ 33' 2.99"N to 28⁰ 33'1.930"N</td> <td style="text-align: center;">76⁰ 11' 15.646"E to 76⁰ 11'15.303"E</td> </tr> </tbody> </table>	Longitude	Latitude	28 ⁰ 33' 2.99"N to 28 ⁰ 33'1.930"N	76 ⁰ 11' 15.646"E to 76 ⁰ 11'15.303"E
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28 ⁰ 33' 2.99"N to 28 ⁰ 33'1.930"N	76 ⁰ 11' 15.646"E to 76 ⁰ 11'15.303"E					
	Total Green Area with Percentage	30.40 ha				
	ElectricitySupply	The electricity required for the project will be sourced from nearby villages. Apart of that diesel will be used for transportation vehicles as well as machineries and that will be drawn from nearest retail outlet.				
	Topography of ML area	The mine lease area is consisting of ridges and valleys (Hills). The highest point in the lease area is recorded to be 361 m RL and the lowest point recorded is 252 m RL bottom pit level.				
	Mining Method & Technology	<p>Proposed Method of Mining: The present mining operations are designed to be carried out by mechanized open cast mining method. The entire mining operations proposed are mechanized. Apart of mining, the loading and transportation up to stack yard shall be done mechanically. It is proposed to load in the trucks/ dumpers directly to the destinations and mineral is not usually put up in this stack yard to avoid the double handling. In the present operation the bench height shall be 9mtrs. Each bench will advance one by one. While carrying out the mining operations in accordance with the above provision the overall pit slope shall be maintained the 49⁰ the mineral bearing rocks being hard and compact.</p> <p>The first mining plan was prepared with a project life of 18</p>				

		years from the date of EC. The EC in the name of M/s RidhiSidhi KSM Resources-JV was considered on dated 17.02.2020. Hence, 14 years are remaining for mining operation. Mining is being carried out and shall remain continue in opencast mechanized mining method.
	Proposed working depth	40.m
	Ultimate depth of Mining	62.0 m BGL
	Ground water level & Intersection	The working depth of the scheme will be 40.0. The general water table around the lease area is at 60-65 m Below Ground Surface Level so there will be no intersection of water table.
	Drainage pattern/ water courses	The hill is mainly sloping both east and west direction. Initial mining shall be mainly above the general ground level with only one side of the pit having slope along hill and other side will remain open. Such situation does not warrant any water accumulation as natural drainage will be available from the other open side of the pit. However, as the mine progresses and mining continue below the general ground level as envisaged during later part of lease period, the mining area will become a depression, which may warrant accumulation of water during rainy season. A scheme is proposed to prevent the accumulation of such water.
	Water requirement & source	The required water will be supplied by private water tankers. Total water demand will be 36.1 KLD which concluded dust suppression (19.1 KLD), Plantation (13.9 KLD) and Domestic demand (3.0 KLD).
	Cost of project	The capital cost for the project will be Rs.7.84 Crores including proposed lease area and machinery will be hired on contract bases.

PROPOSED PLANTATION DETAILS

Year	Plantation Proposed	Survival 80%	Gap Plantation	Species	Place of Plantation
I	6,966	5,573	-	Neem, Peepal, Mango, Shisham, Sirish, Babool, Gulmohar and other local fruity plants	Along the roads, in barren area, surrounding office & rest shelter and other social forestry programme.
II	6,966	5,573	1,393		
III	6,966	5,573	1,393		
IV	-	-	1,393		
V	-	-	-		
Total	20,898	16,719	4,179		

PLANTATION SCHEME

S. No.	Trees	Nos.	Plantation Area
1	Neem, Peepal, Mango, Shisham, Sirish, Babool, Gulmohar and other local fruity plants	18,349	Barrier Zone
2	Neem, Mango, Sheesham, Gulmohar and other local fruity plants	2000	Panchayat& School Zone
3	Neem, Peepal, Shisham, Sirish, Babool&Gulmohar	549	Approach Road
	Total	20,898	-

ENVIRONMENT MANAGEMENT BUDGET (5 YEARS)

The total EMP cost 38.5 lakh is 5% of total project cost (7.84 Cr).

S. No.	Particulars	Capital	Recurring	Total
1	Pollution monitoring – Air, Water, Noise	0	60,000	3,00,000

2	Pollution Control – Water sprinkling	0	3,00,000	15,00,000
3	Wire fencing at plantation sites	0	50,000	2,50,000
4	Plantation including maintenance	5,00,000	1,00,000	10,00,000
5	Rainwater harvesting	2,00,000	20,000	3,00,000
6	Haul road and other roads repair and maintenance	0	1,00,000	5,00,000
Total		7,00,000	6,30,000	38,50,000

BUDGET FOR OCCUPATIONAL HEALTH & SAFETY UNDER ESR

S. No.	Description	Annual Budget
1	Health check-up camps	1,00,000
2	Insurance cover of workers	1,00,000
3	Assistance to local schools, scholarship to students at Govt. school in Kalali&Kalyana Village	1,00,000
4	Computer Lab for Govt. school in Kalali&Kalyana Village	1,00,000
5	Solar Street Lights on Panchayat& Govt. school in Kalali&Kalyana Village	50,000
6	Sanitations (Toilets) and drinking water facility of Govt. school in Kalali&Kalyana Village	1,00,000
7	Vocational training to persons for income generation	50,000
8	Assistance to self-help groups	50,000
Total		6,50,000

ACHIEVED CSR EXPENSES

S. No.	CSR Exp.	Total Expenses
	Health checkup	94,100
	Sports Activities (Village Panchayat)	2,16,905
	Medical Supply to Hospital (ICU Beds)	1,98,500
	School Cultural Activities	1,50,000
	School Bus for Villagers	5,15,000
	Staff Welfare	9,31,724
Total		21,06,229

ACHIEVED EMP EXPENSES

S. No.	EMP EXP.	Total Expenses
1	Air Monitoring System, Pollution Monitoring & Compliances	9,50,500
2	Wastewater treatment agreement	20,000
3	Plantation Exp.	3,16,900
4	Drinking Water Supply	7,63,034
5	Water Sprinkling in Approach Road & Village	29,21,840
6	Water Sprinkling in Mines Area	31,25,000
7	Water Sprinkling for Plantation	36,21,000
8	Road Maintenance	76,12,306
Total		1,93,30,580

The equipment details are given below.

MACHINERY LIST

S. No.	Equipment	Size	Nos
1	Hydraulic Excavator for Loading of mineral	3.2 cum	8
2	Rock breaker (Hydraulic Excavator) as substitute to secondary blasting	1.6 cum	2
3	Rear dumpers for transportation of mineral from mine to destination	25T	28
4	Drill Machine with compressor of 365 cfm capacity.	100-110mm	5
5	Track chain Dozer	350 HP	1
6	Pay loader (General Purpose, loading etc.)	145 HP	1

7	Crane	40T	1
8	Tyre handler	-	1
9	Water sprinkler	10 KL	2
10	Mobile Maintenance van	-	1
11	Tractor	50hp	1
12	Tractor mounted compressor	-	1

DRILLING EQUIPMENT LIST

S. No.	Details	Dia
1	A machine can drill total of meters in a shift	100-110m
2	Total drill meters required per day	540 m
3	Total no of machines required per day	4.50
4	20% consideration for maintenance and spare capacity	0.81
5	Total no of machines required (4.80 say 5)	5

5. In view of the recommendations made by State Expert Appraisal Committee (SEAC) in the said case and further consideration of the documents/details submitted by the Project Proponent; the Authority after discussions decided during **176th Meeting held on 13.06.2024** to **“GRANT ENVIRONMENT CLEARANCE” to the project, under category 1(a) till the validity of Mining Plan i.e. for five years from the date of approval of Mining Plan as approved vide letter dated 16.06.2023 for Area 64.40 Ha with 80,00,000MT/year production by Director General, Mines & Geology Department, Haryana within the scope & meaning of EIA Notification dated 14.09.2006.**

Copy To

- Director (IA Division), MoEF& CC, GoI, Indira Paryavaran Bhavan, Zorbagh Road-New Delhi-110003.
- Chairman, State Environment Impact Assessment Authority, Bay No. 55-58, Prayatan Bhawan, Sector-2, Panchkula, Haryana
- Chairman, Haryana State Pollution Control Board, C-11, Sector-6, Panchkula.
- Director, Environment & Climate Change Department, Haryana, SCO 1-3, Sector-17 D, Chandigarh-160017
- Director General, Mines & Geology Department, Mines & Geology Department, Second Floor, DHL Square, Plot No. 9, Sector-22, IT Park, Panchkula, Haryana
- Regional Office, Ministry of Environment, Forests & Climate Change, Govt. of India, Bay's No. 24-25, Sector 31-A, Dakshin Marg, Chandigarh-160018

Annexure 1

Specific EC Conditions for (Mining Of Minerals)

1. Specific Conditions

S. No	EC Conditions
1.1	<u>The Mining Lease Holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc</u>
1.2	The PP shall get the prior consent of the District Town Planner about the area falling under Aravali range or Natural Conservation Zone as per National Capital Region Planning Board and the Aravali notification dated 07.05.1992 as per Forest NoC issued to the project
1.3	The Environmental clearance is granted subject to the Final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of India and any other court of law, if any as applicable to this project

S. No	EC Conditions
1.4	The PP shall construct the pucca link roads to the mining site before the start of mining
1.5	The PP shall prepare the Mine safety plan and get it approved from the competent authority before the start of mining
1.6	The Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers
1.7	Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The Project Proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads
1.8	Likewise, Alteration or re-routing of foot paths, pagdandies, cart roads, and village infrastructure public utilities or roads (for purposes of land acquisition for mining) shall be avoided to the extent possible and in case such acquisition is inevitable, alternative arrangements shall be made first and then only the area acquired. In these types of cases, inspection Reports by site visit by experts may be insisted upon which should be done through reputed institutes
1.9	The PP shall ensure that total EMP Budget shall be spent on project during construction as well as during operational phase as per table given above
1.10	The EMP cost on Socio Economic activities shall be used before the commencement of the project and EMP recurring inside the project shall be implemented throughout the operation of the project. The PP shall establish Environment Monitoring Cell as per documents submitted
1.11	The PP shall ensure that the amount as earmarked in EMP Budget for Development and Maintenance of Haulage Route as demanded by the locals during the Public Hearing be spent
1.12	Socio Economic Development of the neighbourhood Habitats could be planned and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the SEIAA on six monthly bases
1.13	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. the housing may be in the form of temporary structures to be removed after the completion of the project
1.14	Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented
1.15	An independent study be organized during peak activity, to understand how the actual compare with

S. No	EC Conditions
	the carrying capacities and further decisions taken to maintain sustainability of this essential stone extraction and supply activity. Project Proponent shall ensure that the road may not be damaged due to transportation of stone
1.16	Traffic management plan as submitted shall be implemented in letter and spirit. Apart, a detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is marinated and improved upon after the implementation of the project
1.17	No tree cutting has been proposed in the instant project. A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The Existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed the plantation in 33% of the total area of project site will be carried out including statutory boundary barrier, Gram Panchayat, nearby schools, hospitals and along the road in consultation with local authority or Govt. Body. Native plant species as suggested by villagers/specialist may be planted
1.18	Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The PP shall complete all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing
1.19	The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment, forest and Climate Change and Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out; The Report on six monthly basis on changes in Ground water level and quality shall be submitted to the Regional Office of the Ministry
1.20	The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly Vehicles with PUCC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centres
1.21	There shall be planning, developing and implementing facility of rainwater harvesting measures on long terms basis in consultation with Regional Director, Central Groundwater Board and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board
1.22	Where ever blasting is undertaken as part of mining activity, the Project Proponent shall carry out vibration studies well before approaching any such habitats or other buildings, to evaluate the zone of influence and impact of blasting on the neighbourhood. Within 500 meters of such sites vulnerable to blasting vibrations avoidance of use of explosives and adoption of alternative means of mineral extraction, such as ripper/dozer combination/rock breakers/surface miners etc. should be seriously considered and practiced wherever practicable. A provision for monitoring of each blast should be made so that the impact of blasting on nearby habitation and dwelling units could be ascertained. The covenant of lease deed under Rule 31 of MCR 1960 provides that no mining operations shall be carried out within 50 meters of public works such as public roads and buildings or inhabited sites except with the prior permission from the competent authority

S. No	EC Conditions
1.23	The Project Proponent shall obtain all necessary clearance/permission from all relevant agencies before commencement of work
1.24	Consent to establish/operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974
1.25	The PP shall take precautions to suppress the dust in and around the mining site. Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured
1.26	Implementation of Haryana Government Rehabilitation and Resettlement of Land Owners' Policy as per applicability in the area
1.27	Implementation of Environment Management Policy of the Company w.r.t. judicious use of Mineral resources for growth & development synchronizing mining & environment with prosperity
1.28	The Project Proponent shall also take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted in the study area
1.29	The illumination and sound at night at project site, 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. Project Proponent 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 light/night hours
1.30	A comprehensive study for slope stabilization of mine benches and OB dumps shall be undertaken within one year
1.31	The PP shall manage the overburden at the mining site if left after sale
1.32	Washing of all transport vehicles should be done inside the mining lease
1.33	The PP shall create environment division unit in the project for implementing the conditions of Environment clearance
1.34	The PP shall obtain the permission regarding withdrawal of ground water from CGWA before the start of the project if any and also obtained the CTO from HSPCB after the approval from CGWA
1.35	Any change in stipulations of EC of the approved mining plan will lead to Environment Clearance void-ab-initio and PP will have to seek fresh Environment Clearance
1.36	The PP shall adhere to the approved mining plan and approved closure plan by the competent authority
1.37	That Project Proponent shall submit within one month revised green area plan and so as to maintain 60 % of the green area as block plantation in nearby the villages
1.38	That Project Proponent should use High pressure sprinkler in the mining site to certain dust

S. No	EC Conditions
	pollution
1.39	Project proponent will be responsible for annual Maintenance of panchayat roads as well as nearest connecting roads which will be used for evacuation of mined material

Standard EC Conditions for (Mining of minerals)

1. Statutory Compliance

S. No	EC Conditions
1.1	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
1.2	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 & Others before commencing the mining operations
1.3	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
1.4	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
1.5	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
1.6	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
1.7	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), Mines & Geology Department, Haryana and Indian Bureau of Mines from time to time.. Also adhere to Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012
1.8	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
1.9	The Project Proponent shall follow the mitigation measures provided in MoEF& CC Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining

S. No	EC Conditions
	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”.
1.10	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
1.11	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
1.12	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
1.13	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 MoEF&CC Regional Office for compliance and record
1.14	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

2. Air Quality Monitoring And Mitigation Measure

S. No	EC Conditions
2.1	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 climatologically 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. PM ₁₀ , PM _{2.5} , NO ₂ , CO and SO ₂ 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
2.2	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 PM ₁₀ and PM _{2.5} 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 MoEF&CC/Central Pollution Control Board.

3. Water Quality Monitoring And Mitigation Measures

S. No	EC Conditions
3.1	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 MoEF&CC 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
3.2	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
3.3	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 piezometer 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
3.4	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 MoEF&CC. 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
3.5	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

S. No	EC Conditions
3.6	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 MoEF&CC annually
3.7	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
3.8	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

4. Noise And Vibration Monitoring And Prevention

S. No	EC Conditions
4.1	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines
4.2	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
4.3	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

5. Mining Plan

S. No	EC Conditions
5.1	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

S. No	EC Conditions
5.2	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 and SEIAA for record and verification
5.3	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 MoEF&CC and its concerned Regional Office

6. Land Recalmtion

S. No	EC Conditions
6.1	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
6.2	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
6.3	The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan
6.4	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
6.5	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/SEIAA
6.6	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

S. No	EC Conditions
	maintained properly
6.7	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
6.8	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
6.9	<p><u>Transportation</u></p> <p>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.</p>
6.10	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
6.11	<p><u>Green Belt</u></p> <p>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 irrespective of the stipulation made in approved mine plan.</p>
6.12	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

S. No	EC Conditions
	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
6.13	The Project Proponent shall ensure that trees planted under the project shall be well grown healthy and established trees of more than 10cm DBH (diameter above 137cm above ground level) or more than 31.4cm in girth
6.14	The Project Proponent shall ensure raising the number of established trees as per norms proposed for the project and finally approved during the EC granting process
6.15	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
6.16	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. 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
6.17	The PP shall ensure that the area marked for greenery and trees will not be rendered impervious by any means like soil, compaction or cement concrete or brick or tiles or rubber or plastic cover or any other impervious material in any manner and the area must be maintained pervious for water infiltration/percolation and air flow in the soil. It must be straight on earth and not on any roof or slab of any tile

7. Public Hearing And Human Health Issues

S. No	EC Conditions
7.1	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 MoEF&CC Regional Office and DGMS on half-yearly basis
7.2	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

S. No	EC Conditions
	<p>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</p>
7.3	<p>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, 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 purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).</p>
7.4	<p>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, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications</p>
7.5	<p>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</p>
7.6	<p>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</p>
7.7	<p>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</p>

8. Corporate Environment Responsibility

S. No	EC Conditions
8.1	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
8.2	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 MoEF& CC and its concerned Regional Office

9. Miscellaneous

S. No	EC Conditions
9.1	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 MoEF& CC
9.2	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
9.3	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEF&CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board
9.4	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, MoEF&CC
9.5	The concerned Regional Office of the MoEF&CC including other authorized organization shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) including other authorized officer by furnishing the requisite data/information