

**GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IMPACT ASSESSMENT DIVISION)
NON-COAL MINING SECTOR**

**SUMMARY RECORD OF SPECIAL EAC MEETING ON 12TH JUNE, 2020 OF
THE COMMITTEE OF THE EXPERT APPRAISAL COMMITTEE FOR
ENVIRONMENTAL APPRAISAL OF NON-COAL MINING PROJECTS
CONSTITUTED UNDER THE EIA NOTIFICATION, 2006.**

The Special EAC meeting of the Expert Appraisal Committee for Environmental Appraisal of Mining Projects (Non-Coal) of the Ministry of Environment, Forest and Climate Change was held during **June, 12 2020 through video conference**. The list of participants on 12th June, 2020 is annexed herewith. After login of the Committee Members through video conference link provided by NIC, discussion on each of the Agenda Items was taken up ad-seriatim.

1.0 Member secretary welcomed the chairman and members. He informed that the Hon'ble Minister for Environment, Forest and Climate Change has directed to work out on the monitorable, implementable and relevant conditions for environmental clearances issued by the Ministry. Further, Ministry in receipt of request form the Ministry of Mines for extending the facility of one-time capacity expansion of production in the existing mining lease area without seeking fresh public hearing. Therefore, the special meeting was called for. Since the special meeting was also suggested by the EAC in case of sand mining projects, therefore the proposals, in which reply to ADS was submitted, was also made part of agenda of this meeting.

2.0 Deliberation on the proposals as per the Agenda of Special EAC scheduled on 12th June, 2020

2.1 River Bed Mining Project from River Banas with Production Capacity of 7.2 million TPA (ROM) of Bajri by M/s. S.R. Associates, located at near Villages: Amli, Banthali, Jalseena, Jaleri, Jagatya, Nandpura, Rajmahal, Satwara, Santhali; Tehsil- Deoli; District: Tonk, Rajasthan (1667.78ha) – Reconsideration of EC

[F.No. J-11015/208/2013- IA.II (M); Proposal No. IA/RJ/MIN/20312/2013

The proposal of M/s S.R. Associates is for River Bed Mining Project from River Banas with Production Capacity of 7.2 million TPA (ROM) of Bajri. The mining lease area is located at Village(s) Amli, Banthali, Jalseena, Jaleri, Jagatya, Nandpura, Rajmahal, Satwara, Santhali, Tehsil: Deoli, District: Tonk, Rajasthan.

The project proponent did not attend the meeting. Therefore, the proposal has **deferred**.

2.2 Mining of Sand (Minor Mineral) with proposed production capacity of 2.80 Lakh TPA (ROM) by M/s Narrotham Singh Jadaun, located at Revenue Villages of Tehsil and District-Rajsamand, Rajasthan (489.39ha) – Reconsideration of EC

[File No. J11015/227/2013- IA.II (M); Proposal no.IA/RJ/MIN/19141/2013]

The Proposal of M/s Narrotham Singh Jadaun is for Mining of Sand (Minor Mineral) with proposed production capacity of 2.80 Lakh TPA (ROM). The mine is located at Revenue Villages viz. Nogama, Emri, Bhatoli, Amloi, Mohi, Pipaliacharyan, Barliya, Chhaparkheri, Khatamala, Dhanyala, Ummedpura, Karera, Deviyokamerda and Arawara of Tehsil and District-Rajsamand, Rajasthan in the MLA of 489.39ha. The geographical extents of mining lease area are Latitude: 25°00'20.06" N to 25°13'33.7" N and Longitude: 73°49'26.6" E to 74°00'28.2" E. The project is located in seismic zone-II.

2. As per EIA Notification dated 14th September, 2006 as amended from time to time, the project falls under Category A or Activity 1(a) as the mining lease area is greater than 100 ha.

The Committee previously asked the PP to confirm that is there any other homogeneous mining lease within 500 meters of this lease and forming cluster. If, yes details of the same needs to be provided.

PP in its reply dated 1.06.2020 submitted Cluster Certificate issued by Mining Officer, Rajsamand vide its Lr. No 765 dated 28.05.2020 wherein it has mentioned that there is no mining lease within 500 meters and not forming the cluster situation.

3. The proposal was considered by the Expert Appraisal Committee (Non-Coal Mining) in its meeting held during 21st -23th August, 2013 to determine the terms of reference (TOR) for undertaking detailed EIA. TOR has been issued by MOEF&CC, vide letter no. J-11015/227/2013-IA.II (M) dated 15.10.2013.

4. PP vide Proposal No. IA/RJ/MIN/19141/2013 dated 28.01.2015 applied for Environmental Clearance with proposed production capacity of 2.80 Lakh TPA (ROM). The proposal was placed in EAC meeting held during May 27-29, 2015 wherein the Committee deferred the proposal for want of requisite information. PP submitted the information on 24.12.2015. The proposal was placed in EAC meeting held during March 21-22, 2016 but PP did not attend the meeting. The proposal was again placed in EAC meeting held during June 22-23, 2016 wherein the Committee the Committee deliberated at length the

information submitted by PP and **deferred the Proposal**. The Proposal may be considered further after receipt of revised EIA/EMP report w.r.t. replenishment study. PP did not submit the revised EIA/EMP. The Ministry thereafter conducted a meeting on 24-25 Oct 2016 wherein general recommendation was made by the EAC regarding requirement of replenishment study for sand mining proposals and considering the recommendation of EAC the Ministry asked the PP to submit the same. The PP submitted the Replenishment Report of CMPDI (Phase-1) on 29.12.2017 and the proposal was placed in EAC meeting held during 8.01.2018 wherein the Committee deferred the proposal for want of requisite information from PP & State Government. In this regard a letter was issued to State Govt. on 5.02.2018. PP submitted the information on 24.04.2018 and the proposal was placed in EAC meeting held during 30.05.2018 wherein the EAC recommended for 25% of production capacity subject to submission of certain information. PP submitted the desired information along with replenishment study report (Pre & Post Monsoon) on 3.03.2020 and the proposal was placed in EAC meeting held during 6.05.2020 wherein the Committee deferred the proposal for want of requisite information. PP submitted the information vide its letter dated 30.05.2020 and the proposal is now placed in EAC meeting held during 12.06.2020 wherein the Committee deliberated on the following information submitted by PP.

5. PP has submitted the Letter of Intent (LOI) w.r.t. grant of mining lease for minor mineral Bajri over an area of 489.3965 ha issued by the Joint Secretary, Department of Mines and Geology, Government of Rajasthan vide letter no. P.10 (2)Khan/Group-2/ 2073 dated 05.03.2013, for the period of five years.

The Committee observed that the EAC in its minutes of meeting held during 30.05.2018 inter-alia mentioned that *“The Committee deliberated the issues and is of the view that Department of Mines and Geology, Government of Rajasthan shall first confirm whether the instant LOI/Lease is valid or not before consideration of the Proposal,”*

PP in its reply submitted on 3.03.2020 mentioned that *“The lease is valid as per RMMCR 2017 Rule 9(4) is reproduced as “period of lease may be extended equal to the period for which Mines remained closed (Dies-non) due to any court order. The LOI issued by the state Govt. is valid as per the Honorable Supreme Court order dated 10.05.2019 & 06.12.2019.”*

6. PP has submitted that Mining Plan & Progressive Mine Closure Plan has been approved by Government of Rajasthan, SME, Jaipur Region, Jaipur (Rajasthan) vide their letter no. SME/RAJ-CIR/MINOR/BAJRI/RAJ-11/F-SMEUDR-1/2013/597 dated 11.12.2013.

The Committee observed that previously PP submitted the mining plan for production of 2.8 million TPA (ROM) from 489.39 Ha but now the State Government has demarcated an area of 199.9 Ha for mining. PP also carried out replenishment

study on the same area and proposed to produce 2.76 million TPA of sand. The Committee observed that mining plan for the same is not yet approved but the PP has shown the slice wise plan for production of said quantity of sand. Further, the mining plan approved on 11.12.2013 was valid for five years i.e. till 10.12.2018.

Committee previously asked that “The details of the area to be utilized & not to be utilized for mining, as Approved mining plan at the end of 5 years needs to be provided. Whether area demarcated by DMG comes under the utilized zone or un-utilized zone. In addition to this, area required for mining in the next 5 years needs to be provided with proper justification. The details of any prohibited area within the LOI area or demarcated area needs to be provided.”

PP in its reply submitted on 1.06.2020 mentioned that “The detail of the area to be utilized as per Approved mining plan is 33.5 Hact. Area under statutory barrier 153 Hact Thus areas not to be utilized is 302.8965Hact. Enclosed as **Annexure No.-5A to the letter by PP**. Area Demarcated by Department of Mines & Geology comes under-utilized zone Enclosed as **Annexure-6 to the letter by PP**. The area required under Mining will be same as approved in the Mining Plan. The justification is given as **Annexure No.-7 to the letter by PP**. There is no prohibited area within the LOI area/ demarcated area.”

As it appears from the submission that large area remains un-utilized the Committee previously asked the PP that “Mining is proposed in the small area and still large area is left how PP will ensure to curb illegal mining in the demarcated area and rest of the area falling in the lease (provision of Enforcement and Monitoring Guidelines for Sand Mining, 2020 shall be referred for the same). In addition to this budget for installation surveillance equipment like CCTV, security guards weigh bridge etc., needs to be provided. The mining intensity of the original proposal considering larger area and the current proposal shall be compared and explained, as there is significant difference in mining intensity per ha. Area.”

PP in its reply dated 1.06.2020 submitted that the “Mining is proposed in the small area where mining will be done as per condition of environment clearance, sustainable Sand Mining Guidelines 2016. Environment & Monitoring Guidelines for Sand Mining and RMMCR, 2017. To curb the illegal Mining in the remaining area. There are fourteen entry point (Roads) from where river can be approached. Therefore fourteen numbers of night vision camera will be installed and data will be made available to state government. Apart from this the Project Proponent takes the responsibility that no illegal Mining will be allowed/ done for remaining area. The budget required to curb the illegal Mining will be as follows:-

Budget for Surveillance equipment: i) Transport Permit (Rs 2.0 Lakh), ii) CCTV Camera (Rs 8.5 Lakh), iii) Weigh bridge (Rs 30. Lakh), iv) Personal Computer with power backup (Rs 2.0 Lakh), v) Mobile Application Barcode Scanner (Rs 1.5 Lakh), vi) Radio Frequency identification tags (RFID) and Global Positioning System

(GPS) tracking (Rs 4.0 Lakh), v) Annual audit of each lease (Rs 4.0 Lakh) , and vi) Security Guard (Rs 4.8 Lakh).

Compassion between original & proposed & Current Proposed

Sl. No.	Details	Original Proposed	Current Proposed Stretch –I & II
1	Mining Area	489.3965 Ha.	199.9 Ha.
2	Reserve	302.27 Million Tonnes	54,23,955.794 MT
3	Production	2.81 Lakh Tonnes	2,79,811.8022 MT
4	EMP Cost	13.00 Lacs	17.00 Lacs
5	CSR /CER Cost	4.60 Lacs	33.50 Lacs
6	Water requirement	5 KLD	4.7 KLD

The Committee observed that to achieve a production of 2.8 Lakh TPA the area required is very less as compared to LOI allocated area or area demarcated by DMG. The Committee asked State Government that why a larger area is provided. The Representative of the State Government informed the Committee that it's the policy of Rajasthan Government to grant large area tehsil wise and for the remaining un-utilized area the onus of preventing illegal mining is with PP & State Government. The Committee is of the view that SOP in this regard may be submitted by the State Government.

In addition to above, Committee is also of the view that policy of granting large mining area tehsil wise is not feasible as it blocks the mineral resource and lead to shortage of supply of the sand in the State and also the loss of revenue to State Government. The State Government may look into the policies and grant only that much area which is sufficient for the said production or as per demand of the sand in the State.

Committee observed that PP in its submission made to the Ministry mentioned that *"The extractable Replenished quantity per Hectare is about 27,133.345 Tonne. So to achieve 2.8 Lakh Tonnes per annum the net area required will be 10.399 Hectare. So total net area required during the next five years will be $10.339 \times 3 = 31.197$ ha. The area worked during 1st years and 2nd Year will be worked out in the 4th & 5th year respectively."* The Committee is of the view that area required to achieve 2.8 LTPA of production is 31.197 Ha.

7. The Proponent has submitted that the mining process is opencast semi-mechanized river bed mining of minor minerals. Drilling and blasting is not required as the material is soft in nature. As per MMCR rules 1986 extraction is limited to 3.0 m depth only from the surface area when River bed is dry. Entire stretch of the lease area is around 50.0 km long has been divided in to five block only for mining operation. Mineral will be removed in 3.0 m layer only forming

one bench. Bench will advance from South West to North East direction in the river. Height of bench will be 3.0 mt. Light weight excavators will be deployed for extraction. Mineral will be loaded in trucks of 20 tones capacity trucks and equipment, earth movers will be on hire basis. The total mineable reserves are estimated 172.20 Lakhs Tonnes and anticipated production is only 2.80 Lakhs tonnes per annum, 7.5 m offset left in both side of river bank and 45.0 m radius will be restricted for the any permanent structures as a safety zone. 7.5 m offset left in the banks of lease boundary to protect banks from collapse/scouring.

The Committee observed that EAC in its meeting held during 8.01.2018 inter-alia mentioned that *“PP to give undertaking that only Scrapers shall be used for mining to ensure that the mining depth be maintained as 1.0 meters (max.) from Original Ground Level and No other heavy machinery like bucket excavators, JCB machines etc. shall be used which may adversely impact the aquatic biota”*. In compliance to this condition the PP also submitted an undertaking on non-judicial stamp paper of Rs 100 bearing No AI 281519 dated 18.04.2018 wherein inter-alia it has mentioned that PP shall use only scraper for mining and no excavator & JCB will not be used for mining.

The Committee observed that in last EAC meeting *“The Member Secretary informed the Committee that Ministry has received a representation on 4.05.2020 from Bajri Mining Lease Holders Association wherein it was requested for mechanized mining, mining in night hours and considering the proposal based on the recommendation already made by EAC. One of the PP also reiterated the same by addressing the EAC and informed the Committee there is sufficient material available for mining and requested for grant of EC.”*

The Committee is of the view that now PP has submitted an actual replenishment study which shows that there is some deposition of mineral. PP also submitted the action to be taken for the prevention of illegal mining, State Government is also sensitized for the requirement of replenishment study and methodology for the same, area is already demarcated by State Government, the PP has also increased the budget for the Environmental Management Plan. Therefore, the Committee is of the view the use of machine with bucket capacity of 1.0 m³ and boom length not more than 3 meters may be allowed for this project. Regarding timing of the mining the Committee is of the view that mining shall be restricted to day hours only (9 AM to 6 PM) till the time PP demonstrate the compliance of EC conditions and effective measures to be taken for the protection of environment as per EC Conditions. The depth of mining shall not be more than 1 meter from OGL (un mined area).

8. PP submitted that the depth of ground water level near mining lease area in pre & post monsoon are found to be 3.6 to 20.99 mbgl & 1.08 to 13.31 mbgl respectively. The ground water in this area gets intersected at a depth of more than 20m bgl in riverbed more than 15m near the river. No work shall be carried out below the water level so ground water will not be intersected. The water

requirement in the mine is 3.0 KLD for mining activities, dust suppression (0.25 KLD), drinking purpose (0.75 KLD) and greenbelt development (2 KLD). Required water will be met from Tanker Water Supply. No waste water will be generated from the mining activities. Septic tanks and soak pits will be provided for the disposal of domestic effluents.

The Committee previously asked that PP needs to re-estimate the requirement of water for plantation, dust suppression and domestic use. The source of water needs to be mentioned. The cost of water tanker etc. needs to be mentioned in EMP.

PP in its reply submitted on 1.06.2020 re-estimated the water requirement and it has mentioned that total water requirement will be 4.7 KLD (0.12 KLD for domestic use, 4.5 KLD for dust suppression and 0.083 KLD for plantation).

The Committee is of the view that water requirement for dust suppression is only for one cycle of spraying but for effective dust suppression at least 3 cycles/day is required and thus the water consumption from the project will be around 13.7 KLD (0.12 KLD for domestic, 13.5 KLD for dust suppression and 0.083 KLD for plantation).

9. PP has submitted that as the lease area falls in river bed, plantation & green belt development is not possible within the lease area. It is proposed that plantation will be carried out in the, along the approach roads, around Govt. buildings, schools in consultation with forest department. The Local species will be planted as per the CPCB guidelines. The following plant species will be planted according to CPCB guidelines: Cassia fistula(Amaltas), Delbergia sisso(Sisam), Mangifera indica (Mango), Acacia nilotica (Babul), Azadirachta indica(Neem), Albizza lebbek (Siris), Prosopis cineraria (Khejri), Delonix regia (Gulmohar), Butea monosperm (Palash), Phoenix sylvestris (Khajur), Peepal (Ficus religiosa) , Calotropis procera (Akada), etc. Trees shall necessarily be planted along the periphery of the area in rows. A total of 4000 saplings will be planted (@800/year) in five years. The survival rate is estimated to be 70%. Green belt development as per the scheduled plan will be reviewed every year plantation records will be maintained for period of plantation, area under plantation, length of avenue plantation, type of species density of planted area and survival rate. Soil Quality will be monitored on yearly basis in the area surrounding the core zone used for agricultural activity to check for any negative impacts on the soil quality.

The Committee observed that in response to ADS sought during EAC meeting held during May 27-29, 2015, PP vide its letter Ref: EC/Mines/Add Inf/2015/06 dated 14.12.2015 submitted the revised list of green belt development programs wherein it has mentioned that” A suitable combination of trees can grow fast and also have good leaf cover shall be adopted to develop the greenbelt. About 4000 No's (About 800 No's per year)of native species with some fruit bearing and meditational trees to be proposed for plantation along the road side, banks of river and public places

under social forestry programme in consultation of local authorities in five year” . Species such as Azadirachta indica (Neem), Ailanthus excels (Ardu) Albizia lebbeck(Siris), Ficus religiosa (Peepal), Lasora (Cordia dicotoma), Dalbergia sissoo (Shisham), Tamarindus indica (Imli), Morus alba(Shahtoot), Ziziphus mauritiana (Ber), Syzygium cumini (Jamun), Mangifera indiana (Mango), Diospyros melanoxylon (Tendu), Annona squamosa (Sitafal), Pithecellobium dulce etc.(Jungle jalebi).

The Committee in the last EAC meeting asked that “The PP needs to submit time-bound, activity-wise action plan for EMP, Occupational Health, Pollution, and CER along with the budgetary provision. In addition to details of Environmental Management Cell to be established for implementation of EMP needs to be submitted along with details of manpower and cost”.

PP in its reply dated 1.06.2020 submitted that Extensive plantation on the statutory boundary Will increase the floral diversity of the area. Sufficient availability of Water will be ensured for green belt. The green belt area once marked will not be disturbed during life of mine. The lease area is devoid of any vegetation. Hence, It is proposed to develop social forestry in the approach villages at public places like School, PHC's, Panchayat Bhawan with due permission from Panchayat And in consultation with Forest Department/ local authorities. Total of about 4,000 trees of native species along with some fruit bearing and medicinal trees will be planted at various places in a span of five Years. PP also earmarked a budget of Rs 4.0 Lakhs for the same

The Committee is of the view that PP shall plant not less than 4000 sapling of within a period of 2 years. The height of seedlings shall not be less than 2 meters. Species such as Azadirachta indica (Neem), Ailanthus excels (Ardu) Albizia lebbeck(Siris), Ficus religiosa (Peepal), Lasora (Cordia dicotoma), Dalbergia sissoo (Shisham), Tamarindus indica (Imli), Morus alba (Shahtoot), Ziziphus mauritiana (Ber), Syzygium cumini (Jamun), Mangifera indiana (Mango), Diospyros melanoxylon (Tendu), Annona squamosa (Sitafal), Pithecellobium dulce etc.(Jungle jalebi) . The Plantation shall be carried out along the road side, banks of river and public places under social forestry programme in consultation of local authorities in five year”. The budget proposed for plantation shall not be less than Rs 4 Lakh and the same may be increased if required.

10. PP submitted that the proposed area does not involve forest land. PP has submitted that there is no National Park, Sanctuary, Biosphere Reserve, Wildlife Corridor, Tiger/Elephant Reserve (existing as well as proposed) within 10 km radius of the mine lease. There are seven protected forest and two unclassified forest exist within the study area. State Government of Rajasthan, DMG, Rajasmand vide letter no. ME/Raj-2/Bajari/M.L.- 27/2012/2014-15/1426, dated 11.12.2014 has confirmed that the lease does not fall in Aravali range.

The Committee in the previous meeting asked the PP to submit the certificate w.r.t involvement of forest area in the mining lease.

The PP in its reply dated 1.06.2020 submitted the letter No 354 dated 6.02.2015 issued by DFO, Rajsamand wherein it has mentioned that *Khasra No of village provided is not falling under forest area. In the same letter it has mentioned that there is no National Park, Sanctuary, Biosphere Reserve, Wildlife Corridor, Tiger/ Elephant Reserve (existing as well as proposed) within 10 km radius of the mine lease.*

11. PP submitted that a detailed biological study for the study area [core and buffer zone (10 km radius of the periphery of the mine lease)] has been carried out in October-November & December, 2013. Indian peafowl Schedule-I & Common Langaur Schedule- II are seen in study area. The total budget for Biodiversity conservation for schedule I Fauna Pea Fowl (*Pavo cristatus*), *Panthera Tigris* and for schedule II Fauna Langur (*Semnopithecus entellus*) will be Rs. 80000 per year that will include expenditures in Plantation of fruits, shady and grasses species, repairing of small water tank and Training and awareness programme.

The Committee in the EAC held during May 27-29, 2015 noted that Conservation plan is not adequate and PP needs to revise the same. PP vide letter Ref: EC/Mines/Add Inf/2015/06 dated 14.12.2015 submitted the revised conservation plan of three Schedule-I fauna species found in the study area namely Peafowl, Panther and Rock Python. The Committee in its meeting held during 6th May 2020 asked the PP to submit the conservation plan and proof of its submission to CWLW.

PP in its reply dated 1.06.2020 submitted a letter written to Chief Wildlife Warden vide which three sets of conservation plan prepared for schedule-1 species is submitted to the office of CWLW on 26.05.2020. In addition to authenticated list of flora and fauna as provided by DFO, Rajsamand vide Lr No 354 dated 6.02.2015 is also submitted by PP.

*The Committee observed that budget earmarked for the conservation plan is Rs 25.0 Lakh for five years which includes Rs 5.0 Lakh for Indian Peafowl (*Pavo cristatus*), Rs 10.0 Lakh for Panther (*Panthera pardus*) and Rs 10.0 Lakh for Rock Python (*Python molurus molurus*). Therefore, Copy of approved conservation plan and payment made to State Government shall be reported to Regional Office of MoEF&CC.*

12. PP on 3.03.2020 submitted the District Survey Report of District Tonk, in pursuant to MoEFCC Notification dated 15.01.2016.

13. PP has submitted that the baseline data on air quality, water quality, Soil quality & Ambient noise quality monitored by Noida Testing Laboratories, Greater Noida for one full season i.e. Post-Monsoon season, 2013 (October-

November-December) & other base line data i.e. land use, socio-economic profile of the study area, existing flora, fauna, along with the physiographical status, Geography & hydrological study carried out by team of Enviro Concept (I) Pvt. Ltd., Jaipur. Percentage frequencies of wind in 16 directions have been computed from the recorded data during the study period (October-December, 2013) for 24 hourly intervals to plot wind rose. The overall predominant wind direction during study period was observed towards North East. Ambient Air Quality Monitoring reveals that the concentrations of PM₁₀, PM_{2.5}, SO₂, NO₂ & CO for all the 6 AAQM stations were found within prescribed Limit. Ambient Air Quality Monitoring reveals that the concentrations of PM₁₀ and PM_{2.5} for all the 6 AAQM stations were between respectively 54.1 to 67.84µg/m³ and 34.49 to 47.59µg/m³. As far as the gaseous pollutants SO₂ and NO₂ are concerned, the prescribed CPCB limit of 80µg/m³ has never surpassed at any station. The concentrations of SO₂ were in range of 6.19 to 14.48µg/m³. The concentrations of NO₂ were in range of 16.32 to 44.27µg/m³. The Concentration of CO were in range of 0.37 to 0.55mg/m³. The daytime (Lday) noise levels at all the locations are observed in the range of 42.3 dB (A) to 62.5dB (A) and the night time (L night) noise levels at all the locations was observed to be in the range of 33.1dB (A) to 51.8dB (A). The analysis results of water samples indicate that the pH ranges from 7.54 to 7.64 of study area. The TDS (Total Dissolved Solids) was found in the range 182 mg/L to 1371mg/ L. It is seen that the physico- chemical analysis of other parameters like Chloride, Calcium, Magnesium, Nitrate and Fluoride were found within desirable limit of IS (10500:2012). Soil Samples collected from identified locations indicate pH value ranging from 8.36 to 8.46, which shows that the soil is alkaline in nature. Organic Matter ranges from 0.43% to 0.54% in the soil samples. No biological species, recorded during the study period, falls under any category of threatened species according to IUCN Red Data List of India. PP has thus submitted that the proposed project is not likely to cause any significant impact on the ecology of the area, as adequate preventive measures has been adopted to contain the various pollutants within permissible limits. Green belt development around the area will be developed and also be taken up as an effective pollution mitigative technique, as well as to control the pollutants released from the premises of project and will developed the greenbelt as per the programme to improve aesthetic beauty of the area.

The Committee observed that EAC in its meeting held during May 27-29, 2015 noted Baseline studies were carried out during October-2013 to December-2013. All parameters for air (PM₁₀, PM 2.5, SO₂, NO₂& CO) and Mineralogical composition for the PM₁₀ for free silica, water, soil & noise quality were within the prescribed limits. The Committee noted that the sampling location is not adequate and one month data needs to be conducted. PP vide letter Ref: EC/Mines/Add Inf/2015/06 dated 14.12.2015 submitted the same. PP vide letter dated 14.12.2015 also submitted mitigation measures in view of Rajsamand Lake present in 150 m from the mining lease area on account of ADS raised by EAC. The following mitigation measures proposed by PP are i) Sand mining will be restricted up to 3 meter below river bed or 1.0 Mtr. above ground water level

whichever comes earlier to controlling contamination of ground water, ii) Stabilizing erodible slopes will be maintained to natural flow of water till Lake Boundary without any diversion and creation of ponds on river bed, iii) Dredging will not be allowed, iv) A safety zone of 45.0 m radius is being demarked from the boundary of lake to restrict any mining activities, v) Green belt development proposed in banking of river and lake to prevent erosion of the river banks and minimizing the silting of the lake, vi) The mining will be done in unsaturated zone, thus minimizing loss to habitat, vii) Vehicle washing will not allow in and around the lake to minimize the contamination due to mineral oil etc. , viii) Utmost care will be taken to minimize spillage of sand by covering the loading vehicle by tarpaulin, ix) Mining schedule will be synchronized with the river flow direction and the gradient of the land, x) Mining will not be done during the monsoon season and heavy rainfall, xi) Only PUC vehicle and machineries to be allowed for mining activities , xii) Regular water analysis for ground and lake water will be done to assessment of any water pollution due to mining activities and immediately action to be taken for prevention of the same, xiii) . No, residential and other activities are proposed nearby lake and Awareness activities also proposed to controlling pollution if any, xiv) **Mining will be carried out during day time only** , xv) No foreign material will be allowed to remain in river bed and catchment area or no pits/pockets will be allowed to be filled with such material, xvi) As the lease area is quite large and long in length systematic extraction will be carried out to prevent seasonal scouring and enhanced erosion, xvii) Mining on the concave side of the river channel should be avoided to prevent bank erosion. Similarly meandering segment of river will be selected to prevent natural eroding banks and to promote mining on natural building (aggrading) meanders component, xviii) Regular study to be proposed for replenishment of sand during every monsoon period and xix) Awareness and IEC activities will be doing under NLCP in consultation of local villagers and concern authorities.

The Committee is of the view that PP that PP shall implement the above mentioned measures for the protection of Rajsamand Lake. The depth of mining shall not be more than 1 meter or water level whichever is less. The mining shall be carried out in day time only. In addition to this PP shall submit the implementation plan to RO, MoEF&CC with supporting documents.

The Committee in the previous meeting asked that i) PP needs to ascertain the impact of transportation and details of transportation route viz. (length of the road, type of road, passing through the village or habitation) and mitigative measures to be taken for abatement of pollution due to transportation. The budget for the same needs to be provided and ii) In case there any proposal for utilization of land outside the mining lease for transportation with a mutual agreement with villagers then details of the same needs to be provided along with proposed compensation details.

PP in its reply submitted on 1.06.2020 mentioned that the Impact of the transportation of mineral on local transport infrastructure averred and found to

be in excellent. There is a 1.0 Km Kacha road in west direction. No habitation/ Villages located around this Kacha road. The Width of Road is about 6 mtr. Considering 20 Tonnes capacity and 240 days working about 56 trucks will ply on this Kacha Road. A Budget of Rs. 5 Lacs per annum has been proposed for maintenance of 1.0 km Kacha road and water will be sprinkled twice daily and plantation is also proposed on both side of Kacha Road. Around 670 Trees will be planted on the both side. For these Rs.2.00 lacs for Dust Suppression and Rs.3.00 Lacs for plantation has been proposed in EMP project. PP also submitted that there no proposal for utilization of land outside the mining lease for transportation.

The Committee is of the view that saplings shall be planted in 3 rows and distance between the saplings should not be more than 2.5 meters. In addition to this seedling of height not less than 2 meters to be planted. The plantation along the road side should be completed in 1st year only.

14. The Project Proponent reported that Public Hearing was conducted at 3.00 PM on 26.11.2014, in the premises of Panchayat Samiti Office, Tehsil & District: Rajasamand, under the Chairmanship of ADM Shri Govind Singh Ranawat for, Proposed River Sand Mining Project located at Revenue villages of Tehsil & District: Rajasamand, Rajasthan. Advertisement for conducting public hearing was published on 19.10.2014 in “Hindustan Times” & 20.10.2014 in “Danik Bhaskar.” The issues raised during the hearing were mainly related to water supply pipeline damage, development of the area, safety and environment protection, roads maintenance, employment, etc. PP has developed an action plan to implement the commitments made during Public Hearing.

The Committee observed that EAC in its meeting held during May 27-29, 2015 asked the PP to submit Revised Action Plan along with budgetary provisions on the issues raised during the Public Hearing. PP vide letter Ref: EC/Mines/Add Inf/2015/06 dated 14.12.2015 submitted the same wherein to address the various issues raised during PH the PP proposed an amount of Rs 12.50 lakh/annum for EMP and Rs. 4.60 4.60 Lakh/annum for CSR and Rs 0.55 Lac per /annum for Occupational & Health safety. The Committee in its meeting held during 6.05.2020 asked the PP to submit the time bound action plan for EMP, CER, Occupational Health and Plantation. The PP in its reply submitted on 1.06.2020 submitted that budget for EMP is increased from Rs 13.0 Lakh to Rs 17 Lakh, budget for CSR/CER is increased from Rs 4.60 Lakh to Rs 33.50 Lakh, budget for Rs 0.55 Lakh to Rs 2.0 Lakh.

15. PP has submitted that as a corporate social responsibility they have proposed to invest a lump sum of Rs. 4.6 lakhs. This will be spent in upliftment of the socio-economic status of the people. The activities will be carried out in consultation with the local people during mining operation. However, the suggested activities are construction of drinking water tank with tape in the school and connect with water supply system if available the source nearby area,

construction of low cost toilets for girls in the school, vocational training to the local people depending on the raw material available in the area etc. Besides, it will provide a check on existing system of mining operation. Since the quarries will be allotted on lease basis, mining operation will be legally valid and it will bring income to the state exchequer.

The Committee previously asked the PP to submit the time bound action plan and budget for CER.

The PP in its reply submitted on 1.06.2020 mentioned that budget earmarked for CER is Rs 33.5 Lakh which includes i) Rs 5.0 Lakh for Health checkup camps for villagers (every six months), ii) Rs 4.0 Lakh for Skill development by providing on job training (annually), iii) Rs 3.0 Lakh for assistance to Local Schools, Scholarships to Students (annually) , iv) Rs 2.0 Lakh for Drinking Water Facilities [Financial aid will be provided to resume the water supply by Bisalpur Dam through existing pipeline in villages Thikariya. Water supply through tanker in villages Thikariya and Chuli. Construction and maintenance of water tank in villages Thikariya and Chuli. Water filter will be provided in the village Thikariya & Chuli], v) Rs 3.0 Lakh for Construction and Maintenance of Drainage system in the Village Thikariya with the help of Village Panchayat, vi) Rs 3.0 Lakh construction of Rain water harvesting structure, vii) Rs 2.0 Lakh for Vocational Training to Person for Income Generation, and viii) Rs 2.0 Lakh for Women Empowerment Programme.

Observation of EAC: *The Committee observed that similar activities is proposed by the other project and there should not be any duplication of activities and other activities such as i) installation of solar light in the school and villages, ii) providing computers with internet connection and furniture to nearby government schools, iii) distribution of sanitary napkins in villages, iv) construction of additional room in schools etc. may be done under CER fund.*

16. PP reported that there is no habitation in the mine lease area; hence there is no need of R&R Plan.

17. The Project Proponent submitted that as per the Rajasthan Minor Mineral Concession (Forth Amendment) Rules, 2012 dated 01-11-2012, lessee will deposit contribution in environment management fund to meet out the financial requirement of association/agency for carrying out environmental protection work as per the environment management plan @Rs. 5/- per ton of mineral dispatch. Presently lease holder already deposited E.M.F @Rs. 5/- per ton of mineral dispatch to State Mining Department. In order to implement the environmental protection measures, timely funds will be released as per requirement. In addition to above, it is proposed to invest a cost of Rs. 12.50 (3.30 lakhs as capital and 9.20 lakhs as recurring/annum) on 1) Pollution Control – Water Sprinkling (Capital – Rs. 2.0 Lakhs , Recurring/annum – Rs. 2.0 Lakhs), 2) Pollution Monitoring i.e Water, Air, Soil & Noise etc. -

(Recurring/annum – Rs. 3.25 Lakhs), 3) Plantation including Maintenance (Recurring/annum – Rs. 0.7 Lakhs), 4) Budget for Conservation of Schedule Ist Fauna (Capital – Rs. 0.30 Lakhs , Recurring/annum – Rs. .40 Lakhs) and 5) Others – Road, Wire fencing, RWH (Capital – Rs. 1.0 Lakhs, Recurring/annum – Rs. 0.85 Lakhs).

The Committee previously asked the PP to submit the time bound action plan and budget for EMP.

PP in its reply submitted on 1.06.2020 submitted the revised budget for EMP as Rs 17.0 Lakh which includes i) **Rs 6.0 Lakh/annum** for Environment al Pollution Monitoring i.e. Water, Air, soil & Noise etc. [Air Sample 6 Location 6 x2x3500=42,000/- Water Sample 7 Location 7x2x2500= 35,000/- Noise Sample 6 Location 6x2x2000= 24,000/- Soil Sample 6 Location 6x2x2000= 24,000/- Total cost of monitoring year wise 1, 25,000/ ; frequency of monitoring half yearly], ii) Rs 3.0 Lakh/annum for Dust Suppression (Water Sprinkling) (frequency daily 2 times); iii) Rs 2.0 Lakh for Environment al Awareness Programme (monthly), iv) Rs 2.0 Lakh for Occupational Health and Safety Mine worker (Health camps, training etc) and Rs 4.0 Lakh for Green Belt & plantation. PP also submitted that cost of water tanker is Rs 900/Tanker.

The Committee observed that previously the PP mentioned 3.30 lakhs as capital and 9.20 lakhs as recurring/annum there is no change in the capital cost but PP submitted the revised recurring cost. Thus, the budget earmarked under EMP shall be Rs 3.30 Lakh (Capital) & Rs 17.0 Lakh (Recurring). The Committee is of the view that water shall be sourced from legal water supplier and record of the same needs to be maintained. In addition to this PP shall also keep a record of water spraying trips on daily basis.

18. PP has submitted No such occupational health hazard is anticipated still worker will be provided face mask and ear plugs. Occupational safety and health is very closely related to productivity and good employer – employee relationship. Some of the measures proposed for occupational safety and health include- Protective equipment like dust mask, ear plugs/muffs and other equipments shall be provided for use by the work persons Safety measures will be implemented as per mine act 1952, MMR 1961 mines rules 1955. Notices warning to prevent inadvertent entry of persons shall be displayed at all conspicuous places and in particular near mine entries. Provision of rest shelters for mine workers with amenities like resting, drinking water, and toilets facilities etc. will be provided by lessee Security guards will be posted. Danger signs shall be displayed near the excavations. All workers will be subjected to medical examination as per mines rule 1955 both at times of appointment and at least once in five years. Medical camps will be organized for this activity. Insurance of all employees as per the rules will be carried out. Training of personnel to inculcate safety consciousness through slogans and posters will be carried out. First - Aid facilities in the mining area. Rotation of workers, if

necessary will be done. Regular/periodical monitoring of mine environment to ensure the efficacy of various protective will be carried out. A sum of Rs. 55,000 per year earmarked for the occupational health & Safety of the workers.

The Committee previously asked the PP to submit the time bound action plan and budget for Occupational Health Plan.

PP in its reply submitted on 1.06.2020 mentioned that *for the Persons working in dusty area to be provided with protective Wears such as helmets, dust masks, ear muff Heat stroke continuous sitting driving vehicle ergonomic faculty for the patches etc.; Regular water sprinkling at dust generating areas, Haul roads. Occupational health check-up of all workers working in mine, and pulmonary function test for workers working in dusty areas.* A budget of Rs 2.0 Lakh is earmarked for occupational health plan.

19. PP submitted the details of court cases in SLP(C) 34134/2013 AND SLP(C) 10587/2019; SAW/739/2018 in the matter of STATE OF RAJASTHAN VS BAJRI LEASE/LOI WELFARE SOCIETY; CW/9836/2019 in the matter of BAJRI LEASE/LOI WELFARE SOCIETY VS STATE OF RAJASTHAN.

The Committee observed that in the instant case as reported by PP and State Government the LOI issued by the state Govt. is valid as per the Hon'ble Supreme Court order dated 10.05.2019 & 06.12.2019. Although PP has provided the list of cases on various issues wherein the project proponent is a party. During the meeting the Committee confirmed from the PP that whether there is any case which is directly pertaining to grant of EC. The PP informed that there is no such court case.

20. PP and consultant in the EIA report has given an undertaking that all the points raised in the TOR issued by MOEF are complied with and they also undertake that the facts given in the Final EIA/EMP report are factually correct to the best of their knowledge. PP has given undertaking that the data and information given in the application and enclosures are true to be best of their knowledge and belief and they are aware that if any part of the data and information found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at their risk and cost. PP has submitted an undertaking on non-judicial stamp paper of Rs 100 bearing No AL 281519 dated 18.4.2018 wherein inter-alia it has mentioned that PP shall use only scraper for mining and no excavator & JCB will not be used for mining. PP has submitted the affidavit vide Certificate No. AX 931523 dated 26.02.2020 as per the Ministry's Office Memorandum No.350/2017-IA.III(Pt.), dated 30.05.2018 to comply with all the statutory requirements and judgment 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.

*The Committee observed that in the previous meeting the Member Secretary informed the Committee about the complaint received from the Sr. Advocate wherein the issue raised is regarding applicability of Common Cause Judgment dated 2.08.2017 and illegal mining in the sand mining cases from the State of Rajasthan. Due to this the Committee in its meeting held during 6.05.2020 asked the PP to submit **“a letter from the State Government that there is no violation of Common Cause Judgment dated 2.08.2017 in respect of this mining proposal and there is no production before the SC Order dated 25.11.2013 & after SC Order dated 16.11.2017. An undertaking in this may also be submitted.”***

PP in its reply submitted on 1.06.2020 submitted letter No. Adm/JPR/court-case/2020/182 dated 29.05.2020 wherein it has mentioned no mining has been carried by project proponent in lease area before the Hon'ble Supreme Court Order dated 25.11.2013 in S.L.P. (Civil) No 34134/2013 titled State Government of Rajasthan vs Nature Club of Rajasthan and after order dated 16.11.2017 in S.L.P. (Civil) 34811/2013 titled as Naveen Sharma vs State of Rajasthan. State Government in the same letter confirmed that there is no violation of Common Cause Judgment dated 2.08.2017. The PP also submitted an undertaking vide affidavit bearing No AX 926971 dated 30.05.2020 wherein the PP undertake to comply with Common Cause Judgment dated 2.08.2017 and other statutory requirement. In the same affidavit PP undertake that PP shall be any demand if raised by the State Government for violation of Common Cause Judgment dated 2.08.2017.

The Committee in the previous meeting also asked the PP to submit a letter regarding change of consultant in pursuant to Ministry's O.M. No. J-11013/41/2006-IA. II (I) dated 17.03.2010.

PP In compliance of Ministry Office Memorandum No.-J-11013/412006-IA.II (I) dated 17.03.2020 submitted a letter wherein it has mentioned that *“I hereby submit the Intimation regarding the change of Environment Consultants from Enkay Enviro Services Pvt. Ltd Jaipur to Overseas Min-Tech Consultants Jaipur”*

21. Replenishment Study:

i) **Dendy Boltan formula** : The Ministry granted ToR vide letter no. J-11015/227/2013-IA.II (M) dated 15.10.2013 wherein one the condition was for submission of detailed replenishment study. The PP in EIA/EMP Report submitted some details in EIA/EMP Report based on Dandy-Bolton formula. The EAC in its meeting held during 24-25 Oct 2016 *inter-alia* mentioned that *“The EIA/EMP reports on sand mining proposals estimate replenishment rates based on theoretical Dendy-Boltan formula and not on actual replenishment studies. The Dendy Boltan formula is not very useful to estimate replenishment rates at a particular stretch of a river. Its application to cases such as those of Rajasthan, where river is not perennial, is even more problematic”*. *“In case of Sand/Bajri*

mining projects from the State of Rajasthan, Project Proponents shall first conduct a scientific replenishment study and submit the report before the EAC for further consideration of amount of production for mining of sand/ bajari on yearly basis. Therefore, the Committee **deferred** all such sand/ bajri mining proposals of State of Rajasthan.”

ii) **Meyer-Peter’s equation:** The PP did not submit the revised EIA/EMP Report. But based on the above meeting entrusted the task of replenishment study to CMPDI and submitted the same to MoEF&CC online on 29.12.2017. The Proposal was placed in EAC meeting held during 8.01.2018. The Committee observed that CMPDI conducted a replenishment study of the entire mining lease area during 2017 which is based on the Meyer-Peter’s equation. The CMPDI after crying out extensive field survey and data collection concluded the following for this mining lease

Lease Dimensions				
Area (Ha)	Average length in KM	Av Effective width (KM)	Bed Slope	River
489.40	50.00	0.150	1:510	Banas, Gomti & Taleri

Estimated Bed Load (Tonnes/day)	Estimated deposition or replenishment (Tonnes/day)	Sediment Load Deposition per month (in Tonnes)	Annual Replenishment (in Tonnes)	*Estimated Annual Replenishment (in million m3)
50698.48	40558.78	1216763.51	3650290.52	2.61

*Specific Gravity 1.4 tonne per m3

*Estimates Reserve (in million m3)	*Annual Production Capacity envisaged (as per mining plan in million m3)	Estimated Annual replenishment (in million m3)	Replenishment Status vis-à-vis planned production
12.30	0.20	2.61	Replenishment is more than planned annual production

a) As per the EIA/EMP Report the details of the geological & Mineable Reserves are as follows:

Geological Reserves Million Tone	Mineable Million Tone	Annual Production (MTPA)	Life of Mine (Years)
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32.47	17.22	0.28	61.5
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- b) In the EAC meeting held during 8.1.2018 the then EAC noted the submissions of the Consultant and observed that the present exercise is essentially an empirical attempt of estimating sand replenishment from Meyer's Peter equation. The Committee also enquired about the extent of over-estimation already included in the formula vis-a-vis the actual figures. **M/s CMPDI submitted that Meyer Peter's equation takes into account an overestimation of 25-30% on conservative basis.** The Committee thus observed that the estimations arrived at by M/s CMPDI in Para 4 are already overstated in comparison to actual figures. However, the Committee also noted the submissions of M/s CMPDI that the sand/ bajri existing in the river beds in State of Rajasthan are paleo sand deposits rather than annually replenished sand as the rainfall pattern is not regular in the state and therefore, does not lead to annual replenishment.
- c) In the EAC meeting held on 8.01.2018 the then Committee also interacted with the representatives of the State Government of Rajasthan and noted their submissions. **The officials of State Government submitted that due to stoppage of river sand/ bajri mining in the State, many infrastructure projects (covering Government as well as Private) have come to a halt. Additionally, the State Government is also losing revenue (royalty, license fee etc.). Further, being a mineral rich State, the said order has adversely affected the socio-economic situation w.r.t. loss of jobs/ livelihood etc.**
- d) The then Committee made detailed deliberations and observed that the river sand mining proposals for the State of Rajasthan cannot be governed by annual river replenishment studies alone and there is a need for caution in sand/ bajri mining of these paleo deposits. The Committee also observed that M/s CMPDI has not presented its data in the Scientific Replenishment Study report as the same was accepted to be rough estimate and non-representative of the actual replenishment status.
- e) The then Committee made detailed deliberations on the issues and noted that there is a requirement of identification of active mining area within leased river stretches and subsequent identification and preparation of cross section for assessing replenishment of sand in coming years. Hence, mining permission is technically required to be granted so as to conduct replenishment studies in future and demonstrate the same to State Govt. to regulate mining of paleo deposits in future. **Accordingly, EAC recommended mining of river sand/ bajri to up to 25% capacity of the annual proposed production capacity subject to submission of information and undertaking.** The Committee observed that 25% of annual proposed capacity for this project comes out to be **0.7 Lakh TPA** (25% of 2.8 Lakh TPA).

- f) Based on the recommendations made by EAC in its meeting held during 8.01.2018 , the Ministry, vide letter dated 05.02.2018 has requested Department of Mines and Geology, Government of Rajasthan/Project Proponent to submit the above mentioned information. In this context, the Department of Mines and Geology, Government of Rajasthan, vide letter dated 20.04.2018 has submitted the information for 18 LOIs and as the information was technical in nature the proposal was placed before EAC in its meeting held during 30-31 May, 2018 wherein the State Government submitted the details of identified the mineable block of 199.9 Ha for this mining lease. The Committee deferred the proposal and sought requisite information with respect to validity of LoI and other details.
- g) PP in spite of submitting the requisite information as sought during 8.01.2018 & 30.05.2018 EAC meetings, decided for collection of baseline data w.r.t to level of riverbed pre-monsoon and post-monsoon for the year 2018. The PP submitted the replenishment study report on 23.01.2020 i.e. after the laps of almost 1.5 years. As complete information was not uploaded an EDS was raised on 13.2.2020, the PP submitted the desired information on 3.03.2020 and the proposal was considered in EAC meeting held during 6.05.2020 wherein the Committee deferred the proposal for want of requisite information. PP submitted the information on 1.06.2020 and the is now considered in this EAC meeting held during 12.06.2020.
- h) The Committee observed that technical deliberation on feasibility of project for mining of 2.8 Lakh TPA was almost completed during 2015-16 but replenishment details submitted by PP was based on the Dandy and Bolton formula therefore Committee asked PP to submit the revised EIA/EMP. The PP did not submit the same. The issue thereafter remains is submission of replenishment study report and finalization of safe extractable quantity for this mining lease. The Committee observed that replenishment study for the entire mining lease area has already done by CMPDI and results of which shows that there is a replenishment of the mineral. Although, the said study was based on theoretical calculations but still it gives rough estimates about the replenishment of the mineral in the area.
- iii) **Replenishment Study based on Pre & Post Monsoon Data:** The State Government demarcated the area for mining and PP has also conducted replenishment study based on pre-monsoon and post monsoon data of 2018 over an area which was identified by the State Government. In the EAC meeting held during 6.05.2020 the Committee observed that quantity of the mineral proposed to be excavated as per study report is more than production capacity as mentioned in ToR & EIA/EMP Report. Further, the safety zone of 7.5 meters and $\frac{1}{4}$ non mining zones & $\frac{3}{4}$ mining zone is not marked and reserves available

therein is not mentioned. The PP in its reply submitted on 1.06.2020 inter-alia mentioned that out of total mining lease area of 489.39 Ha the area under $\frac{3}{4}$ width of river is 367.047 Ha, area under $\frac{1}{4}$ width of river is 122.349 Ha and area under 7.5 safety zone is 21.729 Ha. Further, the area demarcated by DMG is 199.9 Ha out of this area falling under 7.5 statutory barrier is nil, area under $\frac{1}{4}$ width of the river is 49.975 Ha and area under $\frac{3}{4}$ width of the river is 149.925 Ha. The reserves blocked under $\frac{1}{4}$ th width of river is 11, 13,639.043 Tonne and Reserves available under $\frac{3}{4}$ width of the river is 43, 10,321.143.

Area of Mining: The PP also submitted that the extractable Replenished quantity per Hectare is about 27,133.345 Tonne. So to achieve 2.8 Lakh Tonnes per annum the net area required will be 10.399 Hectare. So total net area required during the next five years will be $10.399 \times 3 = 31.197$ ha. The area worked during 1st years and 2nd Year will be worked out in the 4th & 5th year respectively.

Depth of Mining: The Committee observed that as per mining plan the depth of mining is 3 meters. But the average deposition of mineral as per replenishment study is about 1.07 meters. The PP in the study report proposed a mining with slice of 1 meter. The Committee therefore restricts the depth of mining as 1 meter or water level whichever is less.

Method of Mining: As per approved mining plan light weight excavators will be deployed for extraction. Mineral will be loaded in trucks of 20 tones capacity trucks and equipment, earth movers will be on hire basis. During EAC meeting held on 8.01.2018 as the actual replenishment study was not available the Committee suggested use of scrappers and also asked for an undertaking from PP in this regard. But now as the replenishment study is available & as per request made by Bajri LOI Holder Association the Committee agreed for use of excavators having bucket capacity not more than 1.0 m³ and boom length not more than 3 meters for this project.

The Committee observed that area required for mining is only 2.12 % to 6.37 % of the total mining lease area and the remaining area will remain un-utilized. The Committee is of the view that how PP will ensure that no illegal mining shall take place in the remaining area. Shri B.S. Soda, Additional Director (Mines), Jaipur and Nodal Officer from the State Government of Rajasthan informed the Committee that it's the policy of the state to grant mining lease tehsil wise and onus of controlling illegal mining is with the LoI/Lease Holder with the support of State Government. The Committee is also of the view that this policy of state government is not feasible and State Government may look into the same as large area having potential mineral resource is blocked and there is a scarcity of mineral and loss of revenue as reported by the State Government time and again. The Committee asked the State Government & PP to submit a SOP for the same.

22. The Proponent submitted that total project cost will be Rs. 0.65 Crore and about 23 persons will be employed directly. The indirect employment opportunity in the form of hiring trucks and Tractors skilled and unskilled labor will also be generated due to mining.

23. The project proponent has agreed to take the responsibility of no illegal mining beyond the proposed area and within the ML area (489.3965 Ha). The ADM, Jaipur who is representative of Rajasthan State Mines department has also informed that the SoP is already in place for prevention of illegal river sand mining in the state of Rajasthan.

24. Based on the deliberations held during May 27-29, 2015; March 21-22, 2016; June 22-23, 2016; October 24-25, 2016; January, 8, 2018; May 30-31, 2018; May 5-6, 2020; June 12, 2020 and document submitted by the PP dated 24.12.2015; 29.12.2017; 24.04.2018; 3.03.2020; and 30.05.2020, the Committee **recommended** the proposal for production of 2.8 Lakh Tonne of Sand/Bajri from 10.399 Ha each year (maximum area 31.197 Ha in 5 years) from the Study Area (Stretch: BADALIYA, PEEPALI, MOHI) located at Tehsil-Rajsamand, District-Rajsamand, State- Rajasthan. In addition to Standard EC conditions as per as per Ministry's O.M. No. 22-34/2018-IA.III dated 08.01.2019 & 16.01.2020 & relevant special conditions as per Sustainable Sand Mining Management Guidelines 2016 the Committee also prescribed the following specific condition for this project:

- 1) Permissible Mining of River Bed Material (Sand/Bajri) shall be limited to 2.8 LTPA from an effective mineable area of 10.399 ha, with a maximum minable depth of 1 meter from the original ground level as reported in the replenishment study. The permissible minable material of 2.8 Lakh Ton will be valid till one year from the day of issuance of the EC.
- 2) For subsequent period, PP shall submit fresh annual replenishment study to MoEF&CC for amendment in EC for mineable quantity and maximum permission depth for mining based on the scientific findings of replenishment study. Such study shall be placed before EAC for appraisal for next three years to assess rate of deposition and accordingly, minable production capacity and depth can be prescribed based on trends analysis, provided it is found scientifically satisfactory by the EAC. The placing of the study report before EAC is mandatory for initial three years.
- 3) The budget earmarked for the **Surveillance** equipments is Rs 56.8 Lakh which includes i) Transport Permit (Rs 2.0 Lakh), ii) CCTV Camera (Rs 8.5 Lakh), iii) Weigh bridge (Rs 30. Lakh), iv) Personal Computer with power backup (Rs 2.0 Lakh), v) Mobile Application Barcode Scanner (Rs 1.5 Lakh), vi) Radio Frequency identification tags (RFID) and Global Positioning System (GPS) tracking (Rs 4.0 Lakh), v) Annual audit of each lease (Rs 4.0 Lakh) , and vi) Security Guard (Rs 4.8 Lakh). The amount shall be kept

in a separate bank account and the same shall be audited annually. The status of implementation with documentary proof needs to be submitted to Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 4) Not more than 13.5 KLD water shall be used for this project. Water shall be sourced from legal suppliers and record of water supplier and trips shall be maintained on daily bases. At least 3 times day water shall be sprayed to avoid fugitive emission. The water tanker having mist generator system shall be used for conservation of water. PP shall submit the status report for implementation along with photograph to Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 5) PP shall plant at least 4000 **sapling** of within a period of 2 years. The height of seedlings shall not be less than 2 meters. Species such as Azadirachta indica (Neem), Ailanthus excels (Ardu) Albizia lebbeck(Siris), Ficus religiosa (Peepal), Lasora (Cordia dicotoma), Dalbergia sissoo (Shisham), Tamarindus indica (Imli), Morus alba (Shahtoot), Ziziphus mauritiana (Ber), Syzygium cumini (Jamun), Mangifera indiaca (Mango), Diospyros melanoxylon (Tendu), Annona squamosal (Sitafal), Pithecelabium dulce etc.(Jungle jalebi) . The Plantation shall be carried out along the road side, banks of river and public places under social forestry programme in consultation of local authorities. The budget earmarked for the plantation shall be Rs 4 Lakh (increase if required) Lakh 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.
- 6) Budget earmarked for the **conservation plan** is Rs 25.0 Lakh for five years which includes Rs 5.0 Lakh for Indian Peafowl (Pavo cristatus), Rs 10.0 Lakh for Panther (Panthera pardus) and Rs 10.0 Lakh for Rock Python (Python molurus molurus). PP shall submit a copy of approved conservation plan and payment made to State Government to Regional Office of MoEF&CC before 1st July of every year.
- 7) PP that PP shall implement the measures proposed for the **protection of Rajsamand Lake**. The depth of mining shall not be more than 1 meter or water level whichever is less. The mining shall be carried out in day time only. In addition to this PP shall submit the implementation plan to Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year with supporting documents.

- 8) PP shall implement the mitigation measure to control the **impact due to transportation** viz. Kaccha road of 1 KM shall be made motarable before commencement of mining, not more than 56 trucks/day shall ply of this road, transportation of mineral from villages having habitation should be avoided, regular water sprinkling (3 times a day) before transportation of mineral, plantation (not less than 1000 sapling having height of not less than 2 meters) on the both side of this road should be completed within 1 year , trucks shall not be overloaded, spillage of the mineral to be avoided, covered transportation. The budget earmarked of Rs. 2.00 Lakhs for Dust Suppression and Rs.3.00 Lakhs for plantation shall be kept in separate bank account and shall be audited annually. Implementation report with supporting documents & photographs before and after shall be submitted to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 9) Budget earmarked for **Corporate Environment Responsibility (CER)** is Rs 33.5 Lakh which includes i) Rs 5.0 Lakh for Health checkup camps for villagers (every six months), ii) Rs 4.0 Lakh for Skill development by providing on job training (annually), iii) Rs 3.0 Lakh for assistance to Local Schools, Scholarships to Students (annually) , iv) Rs 2.0 Lakh for Drinking Water Facilities [Financial aid will be provided to resume the water supply by Bisalpur Dam through existing pipeline in villages Thikariya. Water supply through tanker in villages Thikariya and Chuli. Construction and maintenance of water tank in villages Thikariya and Chuli. Water filter will be provided in the village Thikriya & Chuli], v) Rs 3.0 Lakh for Construction and Maintenance of Drainage system in the Village Thikariya with the help of Village Panchyat, vi) Rs 3.0 Lakh construction of Rain water harvesting structure, vii) Rs 2.0 Lakh for Vocational Training to Person for Income Generation, and viii) Rs 2.0 Lakh for Women Empowerment Programme. The amount proposed under this head shall be kept in a separate bank account and audited annually. Implementation report with supporting documents & photographs before and after shall be submitted to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 10) Budget earmarked for **Environmental Management Plan (EMP)** is Rs 3.30 Lakh (Capital) & Rs 17.0 Lakh (Recurring) which includes i) **Rs 6.0 Lakh/annum** for Environment al Pollution Monitoring i.e. Water, Air, soil &Noise etc. [Air Sample 6 Location 6 x2x3500=42,000/- Water Sample 7 Location 7x2x2500= 35,000/- Noise Sample 6 Location 6x2x2000= 32,000/- Soil Sample 6 Location 6x2x2000= 24,000/- Total cost of monitoring year wise 1, 25,000/ ; frequency of monitoring half yearly], ii) Rs 3.0 Lakh/annum for Dust Suppression (Water Sprinkling) (frequency daily 2 times); iii) Rs 2.0 Lakh for Environment al Awareness Programme (monthly), iv) Rs 2.0 Lakh for Occupational Health and Safety Mine worker (Health camps, training etc) and Rs 4.0 Lakh for Green Belt & plantation.

PP also submitted that cost of water tanker is Rs 900/Tanker. In addition to this PP shall also keep a record of water spraying trips on daily basis. A separate Environment management cell (EMC) shall be created with suitable staff having relevant qualification in environment with supporting staff. The amount proposed under this head shall be kept in a separate bank account and audited annually. Implementation report with supporting documents, test reports, geo-locations & photographs before and after and composition of EMC shall be submitted to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 11) PP shall implement the **occupational health plan** and provide personal protective equipments to all the workers (*helmets, dust masks, ear muffs*), provision of safe drinking water to workers, shelters for rest etc. In addition to this Occupational health check-up of all workers working in mine, and pulmonary function test for workers working in dusty areas. A budget of Rs 2.0 Lakh is earmarked for occupational health plan and the same shall be kept in separate bank account and audited annually. Implementation report with supporting documents & photographs before and after shall be submitted to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 12) PP shall implement the conditions prescribed in Enforcement & Monitoring Guidelines for Sand Mining 2020, as applicable for PP and also SoP issued by the Rajasthan State Government for prevention of illegal river sand mining in the state.

2.3 River Sand Mining Project (Production Capacity 2.80 Lakh TPA) of M/s Himmat Singh Shekhawat, located at vill-Revenue, Tehsil-Nathdwara, Distt-Rajsamand, Rajasthan (773.27ha) – EC Regarding [J-11015/211/2013-IA-II(M); IA/RJ/MIN/19136/2013]

1. The proposal of Shri Himmat Singh Shekhawat is for Mining of Bajri (Minor Mineral) with proposed capacity of 2.80 Lakh TPA (ROM). The Mine is located near village Namana, Khedana, Kumariya Kheda, Ulpura, Kothariya, Kallakhedi, Karjiya Ghati, Gunjol, Kuncholi, Kunthwa, Bagol, Gudla, Dhanyla, Paneriyo Ki Madri, Joshiyo Ki Madri, Tantal, Sarsuniya, Khamnor, Molela, Khedi, Dabun, Saloda, Karai, Sema, ChotaBhanuja, BadaBhanuja of Tehsil: Nathdwara, District: Rajsamand, Rajasthan. The Coordinate of river (Berach & Lapli River) having Latitudes 24° 54' 49" N to 25° 01'13" N and Longitudes 73°37'19" E to 73° 56'10" E.

2. As per EIA Notification dated 14th September, 2006 as amended from time to time, the project falls under Category A or Activity 1(a) as the mining lease area is greater than 100 ha.

The Committee previously asked the PP to confirm that is there any other homogeneous mining lease within 500 meters of this lease and forming cluster. If, yes details of the same needs to be provided.

PP in its reply dated 1.06.2020 submitted Cluster Certificate issued by Mining Officer, Rajsamand vide its Lr. No 764 dated 28.05.2020 wherein it has mentioned that there is no mining lease within 500 meters and not forming the cluster situation.

3. The proposal for determining the Terms of Reference (TORs) was considered by the Reconstituted Expert Appraisal Committee in its 10th meeting held during August 21st -23rd, 2013. TOR was granted to M/s **Himmat Singh Shekhawat** vide Letter No. J-11015/211/2013-IA. II (M) dated 14.10.2013.

4. PP vide Proposal No. IA/RJ/MIN/19136/2013 dated 03.02.2015 applied for Environmental Clearance) with proposed capacity of 2.80 Lakh TPA (ROM). The Proposal was appraised in EAC meeting held during April 29-30, 2015 wherein the Committee rejected the proposal and asked the PP to submit revised EIA/EMP. The Ministry vide its letter dated 25.05.2015 informed that the proposal has been rejected as the EIA/EMP report is not as per provision of EIA Notification, 2006 and asked the PP to submit the revised EIA/EMP report to the Ministry for further necessary action on the matter. PP vide its letter dated 06.08.2015 uploaded the Revised EIA/EMP Report and the proposal was again considered in EAC meeting held during September 22-24, 2015 wherein in the EAC after considering all the environmental and social issues **recommended** the proposal subject to submission of (i) Comments of Mines and Geology, Govt. of Rajasthan w.r.t. violation done by the Project Proponent i.e. mining of Bajri since April 2013 without approved Mining Plan. The PP vide its letter dated 14.12.2015 submitted a letter dated 2.12.2015 issued by Mining Engineer, Rajsamand wherein it has mentioned that the LOI was issued on 5.03.2013, mining plan was approved on 11.12.2013. The State Government in pursuant to Hon'ble Supreme Court order dated 25.11.2013 issued temporary permit on 24.12.2013 and the same was notarized on 24.12.2013. Therefore, the permission for mining for this mining lease is effective from 24.12.2013. As there was no clarity in the reply of State Government regarding violation aspects the Ministry vide its letter dated 22.03.2016 asked PP to clarify whether the mine was operating without EC before the Hon'ble SC Order dated 25.11.2013 or not and also provide the production details month wise since inception of mines duly authenticated by DMG. PP vide its letter dated 13.04.2016 submitted a letter dated 4.04.2016 issued by Mining Engineer, Rajsamand wherein it has mentioned that from month 4/2013 to 11/2013 the production by lease holder is nil and for the month of December 2013 (1431 Tone), January 2014 (55255 Tone), February 2014 (20946 Tone) and March 2014 (18984 Tone).

The Ministry thereafter conducted a meeting on 24-25 Oct 2016 wherein general recommendation was made by EAC regarding requirement of replenishment

study for sand mining proposals and considering the recommendation of EAC the ministry vide letter dated 18.01.2017 asked PP to submit the replenishment study report.

PP entrusted the task of replenishment study to CMPDI and submitted the same to MoEF&CC online on 29.12.2017. The Proposal was placed in EAC meeting held during 8.01.2018 wherein the Committee deferred the proposal for want of requisite information. The Ministry, vide letter dated 05.02.2018 has requested Department of Mines and Geology, Government of Rajasthan/Project Proponent to submit the above mentioned information. The proposal was placed before EAC in its meeting held during 30-31 May, 2018 wherein the State Government submitted the details of identified the mineable block of 145.84 Ha for this mining lease. The Committee deferred the proposal and sought requisite information with respect to validity of LoI and other details.

PP in spite of submitting the requisite information as sought during 8.01.2018 & 30.05.2018 EAC meetings, decided for collection of baseline data w.r.t to level of riverbed pre-monsoon and post-monsoon for the year 2018. The PP submitted the replenishment study report on 21.01.2020 i.e. after the laps of almost 1.5 years. As complete information was not uploaded an EDS was raised on 13.2.2020, the PP submitted the desired information on 2.03.2020 and the proposal was considered in this EAC meeting held during 6.05.2020 wherein the Committee deferred the proposal for want of requisite information. The PP submitted the information on 1.06.2020 and the proposal is placed in EAC meeting held during 12.06.2020 wherein the Committee deliberated on the following information submitted by PP.

5. PP has submitted the Letter of Intent (LOI) w.r.t. grant of mining lease for minor mineral Bajri over an area of 773.2797 ha issued by the Joint Secretary, Department of Mines and Geology, Government of Rajasthan vide letter no. P.10 (3) Khan/Group-2/2013 dated 05.03.2013, for the period of five years.

The Committee observed that the EAC in its minutes of meeting held during 30.05.2018 inter-alia mentioned that *“The Committee deliberated the issues and is of the view that Department of Mines and Geology, Government of Rajasthan shall first confirm whether the instant LOI/Lease is valid or not before consideration of the Proposal,”*

PP in its reply submitted on 2.03.2020 mentioned that *“The lease is valid as per RMMCR 2017 Rule 9(4) is reproduced as “period of lease may be extended equal to the period for which Mines remained closed (Dies-non) due to any court order. The LOI issued by the state Govt. is valid as per the Honorable Supreme Court order dated 10/05.2019 & 6.12.2019 vide letter no. ADM/Jpr/Bajri/2020/68 dated 3.02.2020.”*

6. PP has submitted that Mining Plan & Progressive Mine Closure Plan has been approved by Government of Rajasthan, SME, Jaipur Region, Jaipur (Rajasthan) vide their letter no. SME/RAJ-CIR/MINOR/BAJRI/RAJ-11/F-SMEUDR-1/2013/597 dated 11.12.2013.

The Committee is of the view that previously PP submitted the mining plan for production of 2.8 Lakh TPA (ROM) from 773.2797 Ha but now the State Government has demarcated an area of 145.84 Ha for mining. PP also carried out replenishment study on the same area and proposed to produce **2.79 million TPA of sand**. The Committee observed that mining plan for the same is not yet approved but the PP has shown the slice wise plan for production of said quantity of sand. Further, the mining plan approved on 11.12.2013 was valid for five years i.e. till 10.12.2018.

Committee previously asked that *“The details of the area to be utilized & not to be utilized for mining, as Approved mining plan at the end of 5 years needs to be provided. Whether area demarcated by DMG comes under the utilized zone or un-utilized zone. In addition to this, area required for mining in the next 5 years needs to be provided with proper justification. The details of any prohibited area within the LOI area or demarcated area needs to be provided.”*

PP in its reply submitted on 1.06.2020 mentioned that *“The detail of the area to be utilized as per Approved mining plan is 33.5 Hact. Area under statutory barrier 59.18 Hact Thus areas not to be utilized is 680.59 Hact. Enclosed as **Annexure No.-5A to the letter by PP**. Area Demarcated by Department of Mines & Geology comes under-utilized zone Enclosed as **Annexure-6 to the letter by PP**. The area required under Mining will be same as approved in the Mining Plan. The justification is given as **Annexure No.-7 to the letter by PP**. There is no prohibited area within the LOI area/ demarcated area.”*

As it appears from the submission that large area remains un-utilized the Committee previously asked the PP that *“Mining is proposed in the small area and still large area is left how PP will ensure to curb illegal mining in the demarcated area and rest of the area falling in the lease (provision of Enforcement and Monitoring Guidelines for Sand Mining, 2020 shall be referred for the same). In addition to this budget for installation surveillance equipment like CCTV, security guards weigh bridge etc., needs to be provided. The mining intensity of the original proposal considering larger area and the current proposal shall be compared and explained, as there is significant difference in mining intensity per ha. Area.”*

PP in its reply dated 1.06.2020 submitted that the *“Mining is proposed in the small area where mining will be done as per condition of environment clearance, sustainable Sand Mining Guidelines 2016. Environment & Monitoring Guidelines for Sand Mining and RMMCR, 2017. To curb the illegal Mining in the remaining area. There are five entry point (Roads) from where river can be approached.*

Therefore, five numbers of night vision camera will be installed and data will be made available to state government. Apart from this the Project Proponent takes the responsibility that no illegal Mining will be allowed/ done for remaining area. The budget required to curb the illegal Mining will be as follows: -

Budget for Surveillance equipment: i) Transport Permit (Rs 2.0 Lakh), ii) CCTV Camera (Rs 3.5 Lakh), iii) Weigh bridge (Rs 30. Lakh), iv) Personal Computer with power backup (Rs 2.0 Lakh), v) Mobile Application Barcode Scanner (Rs 1.5 Lakh), vi) Radio Frequency identification tags (RFID) and Global Positioning System (GPS) tracking (Rs 4.0 Lakh), v) Annual audit of each lease (Rs 4.0 Lakh), and vi) Security Guard (Rs 4.8 Lakh).

Compassion between original & proposed & Current Proposed

Sl. No.	Details	Original Proposed	Current Proposed
1	Mining Area	773.28 Ha.	145.84 Ha.
2	Reserve	302.27 Million Tonnes	41,77473.276 MT
3	Production	2.81 Lakh Tonnes	2,79,811.8022 MT
4	EMP Cost	13.00 Lacs	17.00 Lacs
5	CSR /CER Cost	4.60 Lacs	33.50 Lacs
6	Water requirement	5 KLD	9.21 KLD

The Committee observed that to achieve a production of 2.8 Lakh TPA the area required is very less as compared to LOI allocated area or area demarcated by DMG. The Committee asked State Government that why a larger area is provided. The Representative of the State Government informed the Committee that it's the policy of Rajasthan Government to grant large area tehsil wise and for the remaining un-utilized area the onus of preventing illegal mining is with PP & State Government. The Committee is of the view that SOP in this regard may be submitted by the State Government.

In addition to above, Committee is also of the view that policy of granting large mining area tehsil wise is not feasible as it blocks the mineral resource and lead to shortage of supply of the sand in the State and also the loss of revenue to State Government. The State Government may look into the polices and grant only that much area which is sufficient for the said production or as per demand of the sand in the State.

Committee observed that PP in its submission made to the Ministry mentioned that “The extractable Replenished quantity per Hectare is about 28644.501Tonne. So to achieve 2.8 Lacs Tonnes per annum the net area required will be 9.775 Hectare. So total net area required during the next five years will be $9.775 \times 3 = 29.325$ ha. The area worked during 1st years and 2nd Year will be worked out in

the 4th & 5th year respectively. The Committee is of the view that area required to achieve 2.8 LTPA of production is 29.325 Ha.

The Committee observed that proposed production is more than ToR & EIA/EMP Capacity.

7. The Proponent has submitted that the mining process is opencast semi-mechanized river bed mining of minor minerals. Drilling and blasting is not required as the material is soft in nature. As per MMCR rules 1986 extraction is limited to 3.0 m depth only from the surface area when River bed is dry. Entire stretch of the lease area is around 50.0km long has been divided in to five block only for mining operation supervision management and safety. Mineral will be removed in 3.0 m layer only forming one bench. Bench will advance from South West to North East direction in the river. Height of bench will be 3.0 mt. Light weight excavators will be deployed for extraction. Mineral will be loaded in trucks of 20 tones capacity trucks and equipment; earth movers will be on hire basis.

The Committee observed that EAC in its meeting held during 8.01.2018 inter-alia mentioned that *“PP to give undertaking that only Scrapers shall be used for mining to ensure that the mining depth be maintained as 1.0 meters (max.) from Original Ground Level and No other heavy machinery like bucket excavators, JCB machines etc. shall be used which may adversely impact the aquatic biota”*. In compliance to this condition the PP also submitted an undertaking on non-judicial stamp paper of Rs 100 bearing No AI 281519 dated 18.04.2018 wherein inter-alia it has mentioned that PP shall use only scraper for mining and no excavator & JCB will not be used for mining.

The Committee observed that in last EAC meeting *“The Member Secretary informed the Committee that Ministry has received a representation on 4.05.2020 from Bajri Mining Lease Holders Association wherein it was requested for mechanized mining, mining in night hours and considering the proposal based on the recommendation already made by EAC. One of the PP also reiterated the same by addressing the EAC and informed the Committee there is sufficient material available for mining and requested for grant of EC.”*

The Committee is of the view that now PP has submitted an actual replenishment study which shows that there is some deposition of mineral. PP also submitted the action to be taken for the prevention of illegal mining, State Government is also sensitized for the requirement of replenishment study and methodology for the same, area is already demarcated by State Government, the PP has also increased the budget for the Environmental Management Plan. Therefore, the Committee is of the view the use of machine with bucket capacity of 1.0 m³ and boom length not more than 3 meters may be allowed for this project. Regarding timing of the mining the Committee is of the view that mining shall be restricted to day hours only (9 AM to 6 PM) till the time PP demonstrate the compliance of EC conditions and effective measures to be taken for the protection of

environment as per EC Conditions. The depth of mining shall not be more than 1 meter from OGL (un mined area).

8. PP submitted that the depth of ground water level near mining lease area in pre & post monsoon are found to be 3.6 to 20.99 mbgl & 1.08 to 13.31 mbgl respectively. The ground water in this area gets intersected at a depth of more than 20m bgl in riverbed more than 15m near the river. No work shall be carried out below the water level so ground water will not be intersected. The water requirement in the mine is 5.0 KLD for mining activities, dust suppression (3.0 KLD) and drinking purpose (2.0 KLD). Required water will be met from Tanker Water Supply. No waste water will be generated from the mining activities. There will not be any adverse effect on the ground water quality. The minor mineral does not contain any harmful chemical, which could percolate into the ground and pollute the ground water. Hence, no control measures are required. Septic tank and soak pits have been provided for the disposal of domestic effluent generated from domestic activity. However, regular monitoring of quality in the existing hand pumps/tube wells in the vicinity will be carried out both with reference to area and times intervals to study the hydrodynamics of the strata.

The Committee previously asked that PP needs to re-estimate the requirement of water for plantation, dust suppression and domestic use. The source of water needs to be mentioned. The cost of water tanker etc. needs to be mentioned in EMP.

PP in its reply submitted on 1.06.2020 re-estimated the water requirement and it has mentioned that total water requirement will be 9.21 KLD (0.12 KLD for domestic use, 9.0 KLD for dust suppression and 0.090 KLD for plantation).

The Committee is of the view that water requirement for dust suppression is only for one cycle of spraying but for effective dust suppression at least 3 cycles/day is required and thus the water consumption from the project will be around 27.21 KLD (0.12 KLD for domestic, 27 KLD for dust suppression and 0.090 KLD for plantation).

9. PP has submitted that as the lease area falls in river bed, plantation & green belt development is not possible within the lease area. It is proposed that plantation will be carried out in the, along the approach roads, around Govt. buildings, schools in consultation with forest department. The Local species will be planted as per the CPCB guidelines. The following plant species will be planted according to CPCB guidelines: Cassia fistula (Amaltas), Delbergia sisso (Sisam), Mangifera indica (Mango), Acacia nilotica (Babul), Azadirachta indica (Neem), Butea monosperm (Palash), Ficus religiosa (Peepal) etc. A suitable combination of trees that can grow fast and also have good leaf cover shall be adopted to develop the greenbelt. It is proposed to plant native species per year along with trees, herbs, shrubs & grasses. A total of 4450 saplings will be planted in an area of 9.67 ha in five years [as 1st year – 600 saplings (1.3 ha), 2nd year – 750

saplings (1.63 ha), 3rd year – 850 saplings (1.85 ha), 4th year – 1050 saplings (2.28 ha) and 5th year – 1200 saplings (2.61 ha). The survival rate is estimated to be 80%.

The Committee in the last EAC meeting asked that *“The PP needs to submit time-bound, activity-wise action plan for EMP, Occupational Health, Planation, and CER along with the budgetary provision. In addition to details of Environmental Management Cell to be established for implementation of EMP needs to be submitted along with details of manpower and cost”*.

PP in its reply dated 1.06.2020 submitted that Extensive plantation on the statutory boundary Will increase the floral diversity of the area. Sufficient availability of Water will be ensured for green belt. The green belt area once marked will not be disturbed during life of mine. The lease area is devoid of any vegetation. Hence, It is proposed to develop social forestry in the approach villages at public places like School, PHC’s, Panchayat Bhawan with due permission from Panchayat And in consultation with Forest Department/ local authorities. Total of about 4330 trees of native species along with some fruit bearing and medicinal trees will be planted at various places in a span of five Years. PP also earmarked a budget of Rs 4.0 Lakhs for the same

The Committee is of the view that previously 4450 saplings was proposed to be planted and therefore any decreased in no of sapling to be planted is not acceptable. The Committee is of the view that in addition to road side plantation at least 4450 saplings of size not less than 2 meters shall be planted. The budget earmarked for the same also needs to be increased if required. The planation activity shall be completed within 2 years.

10. PP submitted that the proposed area does not involve forest land. PP has submitted that there is no National Park, Sanctuary, Biosphere Reserve, Wildlife Corridor, Tiger/Elephant Reserve (existing as well as proposed) within 10 km radius of the mine lease.

The Committee in the previous meeting asked the PP to submit the certificate w.r.t involvement of forest area in the mining lease.

The PP in its reply dated 1.06.2020 submitted the letter No 355 dated 6.02.2015 issued by DFO, Rajsamand wherein it has mentioned that *Khasra No of village provided is not falling under forest area. In the same letter it has mentioned that there is no National Park, Sanctuary, Biosphere Reserve, Wildlife Corridor, Tiger/Elephant Reserve (existing as well as proposed) within 10 km radius of the mine lease.*

11. PP submitted that a detailed biological study for the study area [core and buffer zone (10 km radius of the periphery of the mine lease)] has been carried out in October-November & December, 2013. There are no rare endemic, endangered species & threatened species of flora within the study area. Indian

peafowl, Panther (Schedule-I) & Common Langaur (Schedule-II) as informed by local villagers were found in Buffer Zone. List of Flora & Fauna for core & Buffer Zone has been forwarded for an authentication, which is under process. The total budget for Biodiversity conservation for schedule I Fauna Pea Fowl (*Pavo cristatus*), *Panthera Tigris* and for schedule II Fauna Langur (*Presbytis entellus*) will be Rs. 85000 for one year that will include expenditures in Construction, Plantation of fruits, shady and grasses species, repairing of small water tank and Training and awareness programme.

The Committee in its meeting held during 6th May 2020 asked the PP to submit the conservation plan and proof of its submission to CWLW.

PP in its reply dated 1.06.2020 submitted a letter written to Chief Wildlife Warden vide which three sets of conservation plan prepared for schedule-1 species is submitted to the office of CWLW on 26.05.2020. In addition to authenticated list of flora and fauna as provided by DFO, Rajsamand vide Lr No 355 dated 6.02.2015 is also submitted by PP.

*The Committee observed that budget earmarked for the conservation plan is Rs 25.0 Lakh for five years which includes Rs 5.0 Lakh for Indian Peafowl (*Pavo cristatus*), Rs 10.0 Lakh for Panther (*Panthera pardus*) and Rs 10.0 Lakh for Rock Python (*Python molurus molurus*). Therefore, copy of approved conservation plan and payment made to State Government shall be reported to Regional Office of MoEF&CC.*

12. PP on 3.03.2020 submitted the District Survey Report of District Tonk, in pursuant to MoEFCC Notification dated 15.01.2016.

13. PP has submitted that the baseline data on air quality, water quality, Soil quality & Ambient noise quality monitored by Noida Testing Laboratories, Greater Noida for one full season i.e. Post-Monsoon season, 2013 (October-November-December). Micro-meteorological data of Udaipur (Dabok) has been obtained from Meteorological Centre, Sanganer, Jaipur for the Post-monsoon season-2013. Percentage frequencies of wind in 16 directions have been computed from the recorded data during the study period (October-December, 2013) for 24 hourly intervals to plot wind rose. The overall predominant wind direction during study period was observed towards North East. Ambient Air Quality Monitoring reveals that the concentrations of PM₁₀, PM_{2.5}, SO₂, NO₂ & CO for all the 6 AAQM stations were found within prescribed Limit. Ambient Air Quality Monitoring reveals that the concentrations of PM₁₀ for all the 6 AAQM stations were found between 61.65 to 80.0µg/m³. PM_{2.5} value found between 34.32 to 75.21µg/m³. As far as the gaseous pollutants SO₂ and NO₂ are concerned, the prescribed CPCB limit of 80µg/m³ has never surpassed at any station. The concentrations of SO₂ were found in range of 6.14 to 15.0µg/m³. The concentrations of NO₂ were found in range of 14.45 to 24.6µg/m³. The Concentration of CO were found in range of 0.3 to 0.52mg/m³. The noise levels

at all the locations are observed to be in the range of 34.1 dB (A) to 53.7 dB (A). The maximum noise level of 53.7 dB (A) was observed at Kankroli and the minimum noise level of 34.1 dB (A) was observed at Kuncholi during the study period. It is observed that the noise levels are in accordance to the prescribed limits. The analysis results of water samples indicate that the pH ranges from 7.24 to 7.62 of study area. The TDS (Total Dissolved Solids) was found in the range 486.82 mg/L to 495.07mg/ L. It is seen that the physico- chemical analysis of other parameters like Chloride, Calcium, Magnesium, Nitrate and Fluoride were found within desirable limit of IS (10500:2012).. Soil Samples collected from identified locations indicate pH value ranging from 7.67 to 8.08, which shows that the soil is slightly alkaline in nature. Organic Matter ranges from 0.53% to 0.89% in the soil samples. No biological species, recorded during the study period, falls under any category of threatened species according to IUCN Red Data List of India. PP has thus submitted that the proposed facilities are not likely to cause any significant impact to the ecology of the area, as adequate preventive measures will be adopted to keep the various pollutants within the permissible limits. Green belt development around the area will also be taken up as an effective pollution mitigative technique, as well as to serve as biological indicators for the pollutants released from the premises of River Sand Mine”.

The Committee in the previous meeting asked that i) PP needs to ascertain the impact of transportation and details of transportation route viz. (length of the road, type of road, passing through the village or habitation) and mitigative measures to be taken for abatement of pollution due to transportation. The budget for the same needs to be provided and ii) In case there any proposal for utilization of land outside the mining lease for transportation with a mutual agreement with villagers then details of the same needs to be provided along with proposed compensation details.

PP in its reply submitted on 1.06.2020 mentioned that the *Impact of the transportation of mineral on local transport infrastructure averred and found to be in excellent. There is a 2.0 Km Kacha road in west direction. No habitation/ Villages located around this Kacha road. The Width of Road is about 6 mtr. Considering 20 Tonnes capacity and 240 days working about 56 trucks will ply on this Kacha Road. A Budget of Rs. 10 Lacs per annum has been proposed for maintenance of 2.0 km Kacha road and water will be sprinkled twice daily and plantation is also proposed on both side of Kacha Road. Around 1300 Trees will be planted on the both side. For these Rs.3.00 lacs for Dust Suppression and Rs.2.00 Lacs for plantation has been proposed in EMP project. PP also submitted that there no proposal for utilization of land outside the mining lease for transportation.*

The Committee is of the view that saplings shall be planted in 3 rows and distance between the saplings should not be more than 2.5 meters. In addition to this seedling of height not less than 2 meters to be planted. The plantation along the

road side should be completed in 1st year only. Total 2000 saplings shall be planted and kuchha road needs to be made memorable before mining. Sufficient budget shall be earmarked for these activities over and above the proposed budget if required.

14. The Project Proponent reported that Public Hearing was conducted at 03.00 PM on 25.11.2014, in the premises of Panchayat Samiti Office: Khamnor, Tehsil: Nathdwara, District: Rajasamand under the Chairmanship of ADM (Administration) Shri Govind Singh Ranawat, Rajasamand & Regional Officer Shri Mahaveer Mehta (RSPCB, Bhilwara) for Proposed River Sand Mining Project located at Revenue villages of Tehsil: Nathdwara, District: Rajasamand, Rajasthan. Advertisement for conducting public hearing was published on 19.10.2014 in “Hindustan Times” & “Dainik Bhaskar on 20.10.2014”. The issues raised during the hearing were mainly related to plantation, benefit to villagers, employment etc. PP has developed an action plan to implement the commitments made during Public Hearing.

The Committee in its meeting held during 6.05.2020 asked the PP to submit the time bound action plan for EMP, CER, Occupational Health and Plantation. The PP in its reply submitted on 1.06.2020 submitted that budget for EMP is increased from Rs 13.0 Lakh to Rs 17 Lakh, budget for CSR/CER is increased from Rs 4.60 Lakh to Rs 33.50 Lakh, budget for Rs 0.5 Lakh to Rs 2.0 Lakh.

15. PP has submitted that there is an economic and social development by any project in a village. There will be expenditure of Rs.4.60 lac under Corporate Social Responsibility (CSR) activity. Health camps will be organized for workers & villagers, EHS Program for workers, insurance cover to workers, proper facility of drinking water will be provided. Constructions of toilets in government and other schools, skill development program, assistance to local school/hospitals, Employment will be provided to local villagers according to their qualifications. In addition to this other commitment made by PP are Preference will be given to local villagers, indirect employment will be given to truck & Tractor drivers. If any person required royalty free bajari for any construction work than it will be provide on written permission of administration and mining department. If any person wants royalty free Bajri for any construction works in village like; house, temple etc. than it will be provided on written permission of Village Sarpanch, administration and mining department (Rajasamand) it will be provided.

The Committee previously asked the PP to submit the time bound action plan and budget for CER.

The PP in its reply submitted on 1.06.2020 mentioned that budget earmarked for CER is Rs 33.5 Lakh which includes i) Rs 5.0 Lakh for Health checkup camps for villagers (every six months), ii) Rs 4.0 Lakh for Skill development by providing on job training (annually), iii) Rs 3.0 Lakh for assistance to Local Schools, Scholarships to Students (annually) , iv) Rs 2.0 Lakh for Drinking Water

Facilities [Financial aid will be provided to resume the water supply by Bisalpur Dam through existing pipeline in villages Thikariya. Water supply through tanker in villages Thikariya and Chuli. Construction and maintenance of water tank in villages Thikariya and Chuli. Water filter will be provided in the village Thikariya & Chuli], v) Rs 3.0 Lakh for Construction and Maintenance of Drainage system in the Village Thikariya with the help of Village Panchayat, vi) Rs 3.0 Lakh construction of Rain water harvesting structure, vii) Rs 2.0 Lakh for Vocational Training to Person for Income Generation, and viii) Rs 2.0 Lakh for Women Empowerment Programme.

The Committee observed that similar activities is proposed by the other project and there should not be any duplication of activities and other activities such as i) installation of solar light in the school and villages, ii) providing computers with internet connection and furniture to nearby government schools, iii) distribution of sanitary napkins in villages, iv) construction of additional room in schools etc. may be done under CER fund.

16. PP reported that there is no habitation in the mine lease area; hence there is no need of R&R Plan.

17. The Project Proponent submitted that as per the Rajasthan Minor Mineral Concession (Third Amendment) Rules, 2012 dated 08-10-2012, lessee will deposit contribution in environment management fund to meet out the financial requirement of association/agency for carrying out environmental protection work as per the environment management plan @Rs. 5/- per ton of mineral dispatch. Presently lease holder already deposited E.M.F @Rs. 5/- per ton of mineral dispatch to State Mining Department. In order to implement the environmental protection measures, timely funds will be released as per requirement. In addition to above, it is proposed to invest a cost of Rs. 13.0 Lakhs (3.50 lakhs as capital and 9.50 lakhs as recurring/annum) on 1) Pollution Control – Water Sprinkling (Capital – Rs. 2.0 Lakhs, Recurring/annum – Rs. 2.0 Lakhs), 2) Environmental Pollution Monitoring I.e. Water, Air, Soil & Noise etc. - (Recurring/annum – Rs. 4.30 Lakhs), 3) Plantation including Maintenance (Recurring/annum – Rs. 0.3 Lakhs), 4) Budget for Conservation of Schedule I Fauna (Capital – Rs. 0.30 Lakhs, Recurring/annum – Rs. .40 Lakhs) and 5) Others – Road, Wire fencing, RWH (Capital – Rs. 1.2 Lakhs, Recurring/annum – Rs. 2.50 Lakhs).

The Committee previously asked the PP to submit the time bound action plan and budget for EMP.

PP in its reply submitted on 1.06.2020 submitted the revised budget for EMP as Rs 17.0 Lakh which includes i) **Rs 7.0 Lakh/annum** for Environment al Pollution Monitoring I.e. Water, Air, soil & Noise etc. [Air Sample 6 Location 6 x2x3500=42,000/- Water Sample 9 Location 9x2x2500= 45,000/- Noise Sample 6 Location 6x2x2000= 24,000/- Soil Sample 6 Location 6x2x2000= 24,000/-

Total cost of monitoring year wise 1, 35,000/ ; frequency of monitoring half yearly], ii) Rs 3.0 Lakh/annum for Dust Suppression (Water Sprinkling) (frequency daily 2 times); iii) Rs 2.0 Lakh for Environmental Awareness Programme (monthly), iv) Rs 2.0 Lakh for Occupational Health and Safety Mine worker (Health camps, training etc) and Rs 4.0 Lakh for Green Belt & plantation. PP also submitted that cost of water tanker is Rs 900/Tanker.

The Committee observed that previously the PP mentioned 3.50 lakhs as capital and 9.50 lakhs as recurring/annum there is no change in the capital cost but PP submitted the revised recurring cost. Thus, the budget earmarked under EMP shall be Rs 3.5 Lakh (Capital) & Rs 18.0 Lakh (Recurring). The Committee is of the view that water shall be sourced from legal water supplier and record of the same needs to be maintained. In addition to this PP shall also keep a record of water spraying trips on daily basis.

18. PP has submitted No such occupational health hazard is anticipated still worker will be provided face mask and ear plugs. Occupational safety and health is very closely related to productivity and good employer – employee relationship. Some of the measures proposed for occupational safety and health include- Protective equipment like dust mask, ear plugs/muffs and other equipments shall be provided for use by the work persons Safety measures will be implemented as per mine act 1952, MMR 1961 mines rules 1955. Notices warning to prevent inadvertent entry of persons shall be displayed at all conspicuous places and in particular near mine entries. Provision of rest shelters for mine workers with amenities like resting, drinking water, and toilets facilities etc. will be provided by lessee Security guards will be posted. Danger signs shall be displayed near the excavations. All workers will be subjected to medical examination as per mines rule 1955 both at times of appointment and at least once in five years. Medical camps will be organized for this activity. Insurance of all employees as per the rules will be carried out. Training of personnel to inculcate safety consciousness through slogans and posters will be carried out. First - Aid facilities in the mining area. Rotation of workers, if necessary will be done. Regular/periodical monitoring of mine environment to ensure the efficacy of various protective will be carried out.

The Committee previously asked the PP to submit the time bound action plan and budget for Occupational Health Plan.

PP in its reply submitted on 1.06.2020 mentioned that *for the Persons working in dusty area to be provided with protective Wears such as helmets, dust masks, ear muff Heat stroke continuous sitting driving vehicle ergonomic faculty for the patches etc.; Regular water sprinkling at dust generating areas, Haul roads. Occupational health check-up of all workers working in mine, and pulmonary function test for workers working in dusty areas.* A budget of Rs 2.0 Lakh is earmarked for occupational health plan.

19. PP submitted the details of court cases in SLP(C) 34134/2013 AND SLP(C) 10587/2019; SAW/739/2018 in the matter of STATE OF RAJASTHAN VS BAJRI LEASE/LOI WELFARE SOCIETY; CW/9836/2019 in the matter of BAJRI LEASE/LOI WELFARE SOCIETY VS STATE OF RAJASTHAN.

The Committee observed that in the instant case as reported by PP and State Government the LOI issued by the state Govt. is valid as per the Hon'ble Supreme Court order dated 10.05.2019 & 06.12.2019. Although PP has provided the list of cases on various issues wherein the project proponent is a party. During the meeting the Committee confirmed from the PP that whether there is any case which is directly pertaining to grant of EC. The PP informed that there is no such court case.

20. PP and consultant in the EIA report has given an undertaking that all the points raised in the TOR issued by MOEF are complied with and they also undertake that the facts given in the Final EIA/EMP report are factually correct to the best of their knowledge. PP has given undertaking in EC Report that they hereby give undertaking that the data and information given in the application and enclosures are true to be best of their knowledge and belief and they are aware that if any part of the data and information found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at their risk and cost. PP has submitted an undertaking on non-judicial stamp paper of Rs 100 bearing No AL 281520 dated 18.4.2018 wherein inter-alia it has mentioned that PP shall use only scraper for mining and no excavator & JCB will not be used for mining. PP has submitted the affidavit vide Certificate No. AX 931521 dated 26.02.2020 as per the Ministry's Office Memorandum No.350/2017-IA.III(Pt.), dated 30.05.2018 to comply with all the statutory requirements and judgment 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.

*The Committee observed that in the previous meeting the Member Secretary informed the Committee about the complaint received from the Sr. Advocate wherein the issue raised is regarding applicability of Common Cause Judgment dated 2.08.2017 and illegal mining in the sand mining cases from the State of Rajasthan. Due to this the Committee in its meeting held during 6.05.2020 asked the PP to submit **"a letter from the State Government that there is no violation of Common Cause Judgment dated 2.08.2017 in respect of this mining proposal and there is no production before the SC Order dated 25.11.2013 & after SC Order dated 16.11.2017. An undertaking in this may also be submitted."***

PP in its reply submitted on 1.06.2020 submitted letter No. Adm/JPR/court-case/2020/185 dated 29.05.2020 wherein it has mentioned no mining has been carried by project proponent in lease area before the Hon'ble Supreme Court Order dated 25.11.2013 in S.L.P. (Civil) No 34134/2013 titled State Government

of Rajasthan vs Nature Club of Rajasthan and after order dated 16.11.2017 in S.L.P. (Civil) 34811/2013 titled as Naveen Sharma vs State of Rajasthan. State Government in the same letter confirmed that there is no violation of Common Cause Judgment dated 2.08.2017. The PP also submitted an undertaking vide affidavit bearing No AX 926970 dated 30.05.2020 wherein the PP undertake to comply with Common Cause Judgment dated 2.08.2017 and other statutory requirement. In the same affidavit PP undertake that PP shall be any demand if raised by the State Government for violation of Common Cause Judgment dated 2.08.2017.

The Committee in the previous meeting also asked the PP to submit a letter regarding change of consultant in pursuant to Ministry's O.M. No. J-11013/41/2006-IA. II (I) dated 17.03.2010.

PP In compliance of Ministry Office Memorandum No.-J-11013/412006-IA.II (I) dated 17.03.2020 submitted a letter wherein it has mentioned that *"I hereby submit the Intimation regarding the change of Environment Consultants from Enkay Enviro Services Pvt. Ltd Jaipur to Overseas Min-Tech Consultants Jaipur"*

21. **Replenishment Study:**

i) **Dendy Boltan formula** : The Ministry granted ToR vide letter no. J-11015/211/2013-IA.II (M) dated 14.10.2013 wherein one the condition was for submission of detailed replenishment study. The PP in EIA/EMP Report submitted some details in EIA/EMP Report based on Dandy-Bolton formula. Although the proposal was recommended by EAC in its meeting held during September 22-24, 2015 but as the replenishment study report is based on theoretical formula the Ministry placed the issue of replenishment study report before EAC in its meeting held during 24-25 Oct 2016 wherein the EAC *inter-alia* mentioned that *"The EIA/EMP reports on sand mining proposals estimate replenishment rates based on theoretical Dendy-Boltan formula and not on actual replenishment studies. The Dendy Boltan formula is not very useful to estimate replenishment rates at a particular stretch of a river. Its application to cases such as those of Rajasthan, where river is not perennial, is even more problematic". "In case of Sand/Bajri mining projects from the State of Rajasthan, Project Proponents shall first conduct a scientific replenishment study and submit the report before the EAC for further consideration of amount of production for mining of sand/bajari on yearly basis. Therefore, the Committee **deferred** all such sand/bajri mining proposals of State of Rajasthan."*

ii) **Meyer-Peter's equation**: Ministry vide letter dated 18.01.2017 asked the PP to submit the replenishment study report. PP entrusted the task of replenishment study to CMPDI and submitted the same to MoEF&CC online on 29.12.2017. The Proposal was placed in EAC meeting held during 8.01.2018. The Committee observed that CMPDI conducted a replenishment study of the entire mining lease area during 2017 which is based on the Meyer-Peter's

equation. The CMPDI after crying out extensive field survey and data collection concluded the following for this mining lease:

Lease Dimensions				
Area (Ha)	Average length in KM	Av Effective width (KM)	Bed Slope	River
773.28	50.00	0.012	1:115	Banas & Khari

Estimated Bed Load (Tonnes/day)	Estimated deposition or replenishment (Tonnes/day)	Sediment Load Deposition per month (in Tonnes)	Annual Replenishment (in Tonnes)	*Estimated Annual Replenishment (in million m3)
72036.46	57629.17	1728875.06	5186625.19	3.70

*Specific Gravity 1.4 tonne per m3

*Estimates Reserve (in million m3)	*Annual Production Capacity envisaged (as per mining plan in million m3)	Estimated Annual replenishment (in million m3)	Replenishment Status vis-à-vis planned production
30.87	0.20	3.70	Replenishment is more than planned annual production

- i) As per the EIA/EMP Report the details of the geological & Mineable Reserves are as follows:

Geological Reserves Million Tone	Mineable Million Tone	Annual Production (MTPA)	Life of Mine (Years)
32.47	30.227	0.28	107.95

- j) In the EAC meeting held during 8.1.2018 the then EAC noted *the submissions of the Consultant and observed that the present exercise is essentially an empirical attempt of estimating sand replenishment from Meyer's Peter equation. The Committee also enquired about the extent of over-estimation already included in the formula vis-a-vis the actual figures. M/s CMPDI submitted that Meyer Peter's equation takes into account an overestimation of 25-30% on conservative basis. The Committee thus observed that the estimations arrived at by M/s CMPDI in Para 4 are already overstated in comparison to actual figures. However, the Committee*

also noted the submissions of M/s CMPDI that the sand/ bajri existing in the river beds in State of Rajasthan are paleo sand deposits rather than annually replenished sand as the rainfall pattern is not regular in the state and therefore, does not lead to annual replenishment.

- k)** In the EAC meeting held on 8.01.2018 the then Committee also interacted with the representatives of the State Government of Rajasthan and noted their submissions. ***The officials of State Government submitted that due to stoppage of river sand/ bajri mining in the State, many infrastructure projects (covering Government as well as Private) have come to a halt. Additionally, the State Government is also loosing revenue (royalty, license fee etc.). Further, being a mineral rich State, the said order has adversely affected the socio-economic situation w.r.t. loss of jobs/ livelihood etc.***
- l)** The then Committee made detailed deliberations and observed that *the river sand mining proposals for the State of Rajasthan cannot be governed by annual river replenishment studies alone and there is a need for caution in sand/ bajri mining of these paleo deposits. The Committee also observed that M/s CMPDI has not presented its data in the Scientific Replenishment Study report as the same was accepted to be rough estimate and non-representative of the actual replenishment status.*
- m)** The then Committee made detailed deliberations on the issues and noted that *there is a requirement of identification of active mining area within leased river stretches and subsequent identification and preparation of cross section for assessing replenishment of sand in coming years. Hence, mining permission is technically required to be granted so as to conduct replenishment studies in future and demonstrate the same to State Govt. to regulate mining of paleo deposits in future. Accordingly, EAC recommended mining of river sand/ bajri to up to 25% capacity of the annual proposed production capacity subject to submission of information and undertaking.* The Committee observed that 25% of annual proposed capacity for this project comes out to be **0.7 Lakh TPA** (25% of 2.8 Lakh TPA).
- n)** Based on the recommendations made by EAC in its meeting held during 8.01.2018 , the Ministry, vide letter dated 05.02.2018 has requested Department of Mines and Geology, Government of Rajasthan/Project Proponent to submit the above mentioned information. In this context, the Department of Mines and Geology, Government of Rajasthan, vide letter dated 20.04.2018 has submitted the information for 18 LOIs and as the information was technical in nature the proposal was placed before EAC in its meeting held during 30-31 May, 2018 wherein the State Government submitted the details of identified the mineable block of 145.84 Ha for this

mining lease. The Committee deferred the proposal and sought requisite information with respect to validity of LoI and other details.

- o) PP in spite of submitting the requisite information as sought during 8.01.2018 & 30.05.2018 EAC meetings, decided for collection of baseline data w.r.t to level of riverbed pre-monsoon and post-monsoon for the year 2018. The PP submitted the replenishment study report on 21.01.2020 i.e. after the laps of almost 1.5 years. As complete information was not uploaded an EDS was raised on 13.2.2020, the PP submitted the desired information on 2.03.2020 and the proposal was considered in EAC meeting held during 6.05.2020 wherein the Committee deferred the proposal for want of requisite information. PP submitted the information on 1.06.2020 and the is now considered in this EAC meeting held during 12.06.2020.
- p) The Committee observed that technical deliberation on feasibility of project for mining of 2.8 Lakh TPA was almost completed during 2015-16 but replenishment details submitted by PP was based on the Dandy and Bolton formula therefore Committee asked PP to submit the revised EIA/EMP. The PP did not submit the same. The issue thereafter remains is submission of replenishment study report and finalization of safe extractable quantity for this mining lease. The Committee observed that replenishment study for the entire mining lease area has already done by CMPDI and results of which shows that there is a replenishment of the mineral. Although, the said study was based on theoretical calculations but still it gives rough estimates about the replenishment of the mineral in the area.
- iii) **Replenishment Study based on Pre & Post Monsoon Data:** The State Government demarcated the area for mining and PP has also conducted replenishment study based on pre-monsoon and post monsoon data of 2018 over an area which was identified by the State Government. In the EAC meeting held during 6.05.2020 the Committee observed that quantity of the mineral proposed to be excavated as per study report is more than production capacity as mentioned in ToR & EIA/EMP Report. Further, the safety zone of 7.5 meters and $\frac{1}{4}$ non mining zones & $\frac{3}{4}$ mining zone is not marked and reserves available therein is not mentioned. The PP in its reply submitted on 1.06.2020 inter-alia mentioned that out of total mining lease area of 773.28 Ha the area under $\frac{3}{4}$ width of river is 579.96 Ha, area under $\frac{1}{4}$ width of river is 193.32 Ha and area under 7.5 safety zone is 73.99 Ha. Further, the area demarcated by DMG is 145.84 Ha out of this area falling under 7.5 statutory barrier is nil, area under $\frac{1}{4}$ width of the river is 36.46 Ha and area under $\frac{3}{4}$ width of the river is 109.38 Ha. The reserves blocked under $\frac{1}{4}$ th width of river is 9, 48,986.63 Tonne and Reserves available under $\frac{3}{4}$ width of the river is 31, 50,289.201.

Area of Mining: The PP also submitted that the extractable Replenished quantity per Hectare is about 28644.501Tonne. So to achieve 2.8 Lacs Tonnes per annum the net area required will be 9.775 Hectare. So total net area required during the next five years will be $9.775 \times 3 = 29.325$ ha. The area worked during 1st years and 2nd Year will be worked out in the 4th & 5th year respectively

Depth of Mining: The Committee observed that as per mining plan the depth of mining is 3 meters. But the average deposition of mineral as per replenishment study is about 1.07 meters. The PP in the study report proposed a mining with slice of 1 meter. The Committee therefore restricts the depth of mining as 1 meter or water level whichever is less.

Method of Mining: As per approved mining plan light weight excavators will be deployed for extraction. Mineral will be loaded in trucks of 20 tones capacity trucks and equipment; earth movers will be on hire basis. During EAC meeting held on 8.01.2018 as the actual replenishment study was not available the Committee suggested use of scrappers and also asked for an undertaking from PP in this regard. But now as the replenishment study is available & as per request made by Bajri LOI Holder Association the Committee agreed for use of excavators having bucket capacity not more than 1.0 m³ and boom length not more than 3 meters for this project.

The Committee observed that area required for mining is only 1.26 % to 3.79 % of the total mining lease area and the remaining area will remain un-utilized. The Committee is of the view that how PP will ensure that no illegal mining shall take place in the remaining area. Shri B.S. Soda, Additional Director (Mines), Jaipur and Nodal Officer from the State Government of Rajasthan informed the Committee that it's the policy of the state government to grant mining lease tehsil wise and onus of controlling illegal mining is with the LoI/Lease Holder with the support of State Government. The Committee is also of the view that this policy of state government is not feasible and State Government may look into the same as large area having potential mineral resource is blocked and there is a scarcity of mineral and loss of revenue as reported by the State Government time and again. The Committee asked the State Government & PP to submit a SOP for the same.

22. The Proponent submitted that total project cost will be Rs. 0.68 Crore and about 23 persons will be employed directly. The indirect employment opportunity in the form of hiring trucks and Tractors skilled and unskilled labor will also be generated due to mining.

23. The project proponent has agreed to take the responsibility of no illegal mining beyond the proposed area and within the ML area (773.28 Ha). The ADM, Jaipur who is representative of Rajasthan State Mines department has also

informed that the SoP is already in place for prevention of illegal river sand mining in the state of Rajasthan.

24. Based on the deliberations held during April 29-30, 2015; September 22-24, 2015; October 24-25, 2016; January, 8, 2018; May 30-31, 2018; May 5-6, 2020; June 12, 2020 and document submitted by the PP dated 06.08.2015; 02.12.2015; 14.12.2015; 13.04.2016; 29.12.2017; 21.01.2020; 2.03.2020; and 01.06.2020, the Committee **recommended** the proposal for production of 2.8 Lakh Tonne of Sand/Bajri from 9.775 Ha each year (maximum area 29.325 Ha in 5 years) from the area demarcated by Department of Mines & Geology, Rajasthan, located at village(s) of Tehsil Nathdwara, District Rajsamand, Rajasthan. In addition to Standard EC conditions as per as per Ministry's O.M. No. 22-34/2018-IA.III dated 08.01.2019 & 16.01.2020 & relevant special conditions as per Sustainable Sand Mining Management Guidelines 2016 the Committee also prescribed the following specific condition for this project:

- 1) Permissible Mining of River Bed Material (Sand/Bajri) shall be limited to 2.8 LTPA from an effective mineable area of 9.775 Ha, with a maximum minable depth of 1 meter from the original ground level as reported in the replenishment study. The permissible minable material of 2.8 Lakh Ton will be valid till one year from the day of issuance of the EC.
- 2) For subsequent period, PP shall submit fresh annual replenishment study to MoEF&CC for amendment in EC for mineable quantity and maximum permission depth for mining based on the scientific findings of replenishment study. Such study shall be placed before EAC for appraisal for next three years to assess rate of deposition and accordingly, minable production capacity and depth can be prescribed based on trends analysis, provided it is found scientifically satisfactory by the EAC. The placing of the study report before EAC is mandatory for initial three years.
- 3) The budget earmarked for the **Surveillance** equipments is Rs 51.8 Lakh which includes i) Transport Permit (Rs 2.0 Lakh), ii) CCTV Camera (Rs 3.5 Lakh), iii) Weigh bridge (Rs 30. Lakh), iv) Personal Computer with power backup (Rs 2.0 Lakh), v) Mobile Application Barcode Scanner (Rs 1.5 Lakh), vi) Radio Frequency identification tags (RFID) and Global Positioning System (GPS) tracking (Rs 4.0 Lakh), v) Annual audit of each lease (Rs 4.0 Lakh), and vi) Security Guard (Rs 4.8 Lakh). The amount shall be kept in a separate bank account and the same shall be audited annually. The status of implementation with documentary proof needs to be submitted to Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 4) Not more than 28 KLD water shall be used for this project. Water shall be sourced from legal suppliers and record of water supplier and trips shall be maintained on daily bases. At least 3 times day water shall be sprayed

to avoid fugitive emission. The water tanker having mist generator system shall be used for conservation of water. PP shall submit the status report for implementation along with photograph to Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 5) PP shall plant at least 4330 saplings of within a period of 2 years. The height of seedlings shall not be less than 2 meters. Species such as Azadirachta indica (Neem), Ailanthus excels (Ardu) Albizia lebbeck(Siris), Ficus religiosa (Peepal), Lasora (Cordia dicotoma), Dalbergia sissoo (Shisham), Tamarindus indica (Imli), Morus alba (Shahtoot), Ziziphus mauritiana (Ber), Syzygium cumini (Jamun), Mangifera indica (Mango), Diospyros melanoxylon (Tendu), Annona squamosa (Sitafal), Pithecelabium dulce etc.(Jungle jalebi) . The Plantation shall be carried out along the road side, banks of river and public places under social forestry programme in consultation of local authorities. The budget earmarked for the plantation shall be Rs 4 Lakh (increase if required) Lakh 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.
- 6) Budget earmarked for the **conservation plan** is Rs 0.85 Lakh/annum for various activities. PP shall submit a copy of approved conservation plan and payment made to State Government to Regional Office of MoEF&CC before 1st July of every year.
- 7) PP shall implement the mitigation measure to control the **impact due to transportation** viz. Kaccha road of 2 KM shall be made motarable before commencement of mining, not more than 56 trucks/day shall ply of this road, transportation of mineral from villages having habitation should be avoided, regular water sprinkling (3 times a day) before transportation of mineral, plantation (not less than 2000 sapling having height of not less than 2 meters) on the both side of this road should be completed within 1 year , trucks shall not be overloaded, spillage of the mineral to be avoided, covered transportation. The budget earmarked of Rs. 2.00 Lakhs for Dust Suppression and Rs.3.00 Lakhs for plantation shall be kept in separate bank account and shall be audited annually. Implementation report with supporting documents & photographs before and after shall be submitted 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 **Corporate Environment Responsibility (CER)** is Rs 33.5 Lakh which includes i) Rs 5.0 Lakh for Health checkup camps for

villagers (every six months), ii) Rs 4.0 Lakh for Skill development by providing on job training (annually), iii) Rs 3.0 Lakh for assistance to Local Schools, Scholarships to Students (annually) , iv) Rs 2.0 Lakh for Drinking Water Facilities [Financial aid will be provided to resume the water supply by Bisalpur Dam through existing pipeline in villages Thikariya. Water supply through tanker in villages Thikariya and Chuli. Construction and maintenance of water tank in villages Thikariya and Chuli. Water filter will be provided in the village Thikriya & Chuli], v) Rs 3.0 Lakh for Construction and Maintenance of Drainage system in the Village Thikariya with the help of Village Panchyat, vi) Rs 3.0 Lakh construction of Rain water harvesting structure, vii) Rs 2.0 Lakh for Vocational Training to Person for Income Generation, and viii) Rs 2.0 Lakh for Women Empowerment Programme. PP shall ensure that there should not be any duplication of activities by other Project and other activities such as i) installation of solar light in the school and villages, ii) providing computers with internet connection and furniture to nearby government schools, iii) distribution of sanitary napkins in villages, iv) construction of additional room in schools etc. may be done under CER fund. The amount proposed under this head shall be kept in a separate bank account and audited annually. Implementation report with supporting documents & photographs before and after shall be submitted to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 9) Budget earmarked for **Environmental Management Plan (EMP)** is Rs 3.50 Lakh (Capital) & Rs 18.0 Lakh (Recurring) which includes i) **Rs 7.0 Lakh/annum** for Environment al Pollution Monitoring I.e. Water, Air, soil & Noise etc. [Air Sample 6 Location 6 $2 \times 3500 = 42,000/-$ Water Sample 9 Location 9 $2 \times 2500 = 45,000/-$ Noise Sample 6 Location 6 $2 \times 2000 = 24,000/-$ Soil Sample 6 Location 6 $2 \times 2000 = 24,000/-$ Total cost of monitoring year wise 1, 35,000/ ; frequency of monitoring half yearly], ii) Rs 3.0 Lakh/annum for Dust Suppression (Water Sprinkling) (frequency daily 2 times); iii) Rs 2.0 Lakh for Environment al Awareness Programme (monthly), iv) Rs 2.0 Lakh for Occupational Health and Safety Mine worker (Health camps, training etc) and Rs 4.0 Lakh for Green Belt & plantation. PP also submitted that cost of water tanker is Rs 900/Tanker. The water shall be sourced from legal water supplier and record of the same needs to be maintained. In addition to this PP shall also keep a record of water spraying trips on daily basis. A separate Environment management cell (EMC) shall be created with suitable staff having relevant qualification in environment with supporting staff. The amount proposed under this head shall be kept in a separate bank account and audited annually. Implementation report with supporting documents, test reports, geo-locations & photographs before and after and composition of EMC shall be submitted to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 10) PP shall implement the **occupational health plan** and provide personal protective equipments to all the workers (*helmets, dust masks, ear muffs*), provision of safe drinking water to workers, shelters for rest etc. In addition to this Occupational health check-up of all workers working in mine, and pulmonary function test for workers working in dusty areas. A budget of Rs 2.0 Lakh is earmarked for occupational health plan and the same shall be kept in separate bank account and audited annually. Implementation report with supporting documents & photographs before and after shall be submitted to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 11) PP shall implement the conditions prescribed in Enforcement & Monitoring Guidelines for Sand Mining 2020, as applicable for PP and also SoP issued by the Rajasthan State Government for prevention of illegal river sand mining in the state.

2.4 River Sand/Bajri Mine (ML Area 1299.0 ha) Tehsil Jahajpur, District Bhilwara, Rajasthan of M/s M/s Shekhawat Associates – Reconsideration of EC. [Proposal No.IA/RJ/MIN/27046/2013; File No.J-11015/259/2013-IA.II (M)]

The proposal of M/s Shekhawat Associates is for mining of Bajri (Minor Mineral) at 26 revenue village(s) of Tehsil-Jahazpur, District-Bhilwara, Rajasthan with proposed production capacity of 42.0 Lakh TPA (ROM) of Bajri in the mine lease area of 1299.0ha. The mine lease area lies in Banas River bed. The Latitudes and Longitudes of the mine lease area lies between 25045'00" N to 25029'00" N and 75006'00" E to 750 19'00" E on Survey of India toposheet number 45 O/2, 45 O/3, 45 O/5, 45 O/6 and 45 O/7. As per Seismic Zoning Map of India IS: 1893(Part-1):2002, the project is located in seismic zone-II.

2. The PP was absent, therefore, the EAC has **deferred** the proposal.

3 Standardization Environmental Clearance conditions in respect of non-coal mining

1. Member secretary informed that the Hon'ble Minister asked to workout practically implementable, monitorable and feasible and also minimize the number of conditions. Therefore, initially the following standard EC Conditions issued by the Ministry's O.M No 22-34/2018-IA.III dated 8.01.2019 and Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 were analyzed by the QCI/NABET and submitted the report.

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 MoEF&CC 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 MoEF&CC.

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.

44) 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.

2. The Summary of analysis by QCI / NABET on NCM conditions:-

1		2	3	4	5	6	7	8	9	10	11	Total
Observations	Statutory compliance :	Standard Conditions										
		Air Quality Monitoring & Prevention	Water Quality Monitoring & Prevention	Noise Monitoring and Prevention	Mining plan	Land reclamation	Transportation	Green Belt	PH and Human health issues	CER	Misc.	
EXISTING EC CONDITION	14	2	8	3	3	8	2	5	7	2	5	59
Need to be Removed	3		1					1				5
Should go as Annexure	11				1	1	1	3	1	1	2	21
REVISED EC CONDITION	0	2	7	3	2	7	1	1	6	1	3	33

Sl.No.	Categorization of EC Condition	Number
1	Already part of requirements under other Acts or Rules (adding No Value)	5
2	One time compliance	11
3	As commitments from PP as part of EMP	35
4	Regular Monitoring/ Measurable	8
Total		59

Sl. No.	MONITORING OF EC CONDITIONS			Number
1	GREEN	Documentary Evidence	Desktop using IT Platform	25
2	ORANGE			
3	RED	Site specific Check	Physical Verification	8
TOTAL				33

3. After detailed deliberations, the EAC expressed the following views:

- (i) The EC conditions shall be reduced to the extent possible, the conditions which are relevant and specific to the project only shall be prescribed.
- (ii) The conditions shall be monitorable and quantifiable for effective compliance.
- (iii) Where ever the forestland or wildlife issue is involved, the clearance under Forest (Conservation) Act and Wildlife (Protection) Act shall be in place before appraisal of the project.
- (iv) The condition in respect of greenbelt shall be, *inter alia*, including the plantation all along boundary of mining lease within first two years of mining operations; plantation of not less than 2 m height saplings; drip irrigation; manuring; monitoring of plantation in addition to the reclamation of mining areas both concurrent/progressive and mine closure phase.
- (v) Conditions such as compliance with the provisions of the other Acts / Rules / Regulations / Permissions / Clearances / NoCs / Authorizations, like shall not be prescribed as these compliances any way shall have to comply by the PP.
- (vi) The committee is of the view that due to poor quality of the EIA/EMP and no quantifiable mitigation measures were suggested in the EMP, as a precautionary principle, most of the conditions were prescribed. This can be avoided if list of quantifiable measures is available in the EMP as a separate chapter or part.
- (vii) Any proposal for expansion of the existing production capacity of EC may be seen from the perspective of violation if any, of any of the

statutory requirements under Mines Act 1952 and the rules, regulations & order made thereunder with action taken if any.

- (viii) Technical issues related with mining methods needs not be mentioned in the General and Special conditions of the EC and may be substituted with violation of any of the statutory requirements with compliance, dealing with the working conditions and environment in mines so as to prevent accidents and occupational diseases and to provide basic amenities to mine workers may be sought from appropriate statutory authority.
- (ix) Impact of mining activities on habitation within 500m from the lease boundary, and action taken by project proponents for mitigation of the same needs special mention.
- (x) Copy of the statutory compliance report submitted by the project proponents may be shared among different stakeholders.

4. After detailed deliberation, the chairman advised all the members to work out on the monitorable conditions by the next meeting based on the reference of standard conditions already existing, analysis of the QCI/NABET, learnings during the deliberations, etc.

4.0 Modalities for one-time capacity expansion up to 40% in the existing mining lease area in line with the circular on coal mining.

1. Ministry of Mines has requested that Non-coal mining project involving increase in production capacity up to 40% may also be exempted from the requirement of public hearing subject to conditions deemed necessary by EAC of Coal Mining project recommended in their meeting held on 25.07.2017 for Coal mining project.

2. It is submitted that the Ministry of Coal in order to allow rapid expansion in coal production had made request for dispensation in public hearing to expedite Environmental Clearances. In order to facilitate grant of Environmental Clearance (EC) to the expansion projects of coal mines, the Ministry has issued Office Memorandums from time to time providing exemption from public hearing.

3. The request of Ministry of Coal was considered by the Expert Appraisal Committee (EAC) in the Ministry constituted for appraisal of projects relating to Thermal and Coal sectors. The Committee recommended for exemption from public hearing while considering grant of environmental clearances to the expansion projects of coal mines, involving increase in production capacity up to 40% in 2-3 phases after the due diligence and subject to fulfillment of certain requirements as follows:

- Predicted air quality parameters are within the prescribed norms.

- Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.
- Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go.
- Public hearing already conducted for the total mine lease area involved and no more area is required for the proposed expansion.
- Compliance status of EC conditions monitored by the concerned Regional Office of this Ministry is found to be satisfactory.
- Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.

4. Vide OM no J-11015/224/2015-IA.II dated 15th September 2017, the Ministry has exempted public hearing while considering grant of environmental clearances to the expansion projects of coal mines, involving increase in production capacity up to 40% in 2-3 phases subject to certain conditions as under:

- The proposed expansion can go up to a maximum of 40% of capacity, wherein the last public hearing was conducted.
- There is no increase in area for the proposed expansion vis-a-vis the area in EC, wherein last public hearing was conducted.
- Mineral transport is through conveyor system up to the silo and loading to railway wagons, and not by road.
- The EAC shall carry out the due diligence on all the parameters mentioned in para 3 above, and make its recommendations accordingly.
- EAC may consider the need for a third party study through an expert agency in a time bound manner, after grant of EC.

5. It is further submitted that the Expert Appraisal Committee (EAC) in the Ministry constituted for appraisal of projects relating to Thermal and Coal sectors deliberated on the matter and recommended for exemption from public hearing while considering grant of environmental clearances to the expansion projects of coal mines subject to fulfillment of certain requirements which were relevant to coal mines. The same may not be relevant to non-coal mining projects. Therefore, the ministry decided to referring the matter to the EAC non-coal mining sector for deliberation and recommendation of certain requirements which would be relevant and implementable in non-coal mining projects.

6. Member Secretary, EAC has given detailed presentation on the difference of coal and non-coal mining, in general and associated issues, etc.

Environment Parameter	Coal Mining	Non Coal Mining
Mining Areas	Valleys	Hillocks

Deposition	Sedimentary in nature	Magmatic followed by sedimentation
Formations	Seams	Intrusions
Continuity	Continuous	Staggered
Mining sequence	Continuous and sequential progress	Continuous and sequential progress may not be possible – defining criteria is grade of the ore
Waste	Mostly inert material	Consist of even low grade material
OB	Comparatively high	Comparatively low
Beneficiation	Rarely followed by washeries	Mostly followed by beneficiation plants
Air Quality	<p>Sources of Air Pollution:</p> <ol style="list-style-type: none"> 1. Drilling 2. Blasting 3. Transportation of coal through haul roads 4. Coal Handling Plant 5. Coal transportation 6. Handling of Overburden <p>Major sources of air pollution in a coal mine are listed above. Impact due to drilling and blasting is temporal and restricted to working area/mine boundary.</p> <p>Air pollution from transportation of coal through haul roads is continuous and its effect is mostly restricted to lease boundary.</p> <p>Coal from the underground/opencast mines is crushed at Coal Handling Plant and loaded to trucks. The activity may be continuous and the effect is restricted to CHP area.</p> <p>Most of the coal mines in India transport the coal from CHP to siding by road. This creates the fugitive emissions in the villages through which the road is passing and may damage the</p>	<p>Sources of Air Pollution:</p> <ol style="list-style-type: none"> 1. Drilling 2. Blasting 3. Haulage 4. Crushing, Screening & Loading of mineral 5. Mineral transportation <p>Major sources of air pollution due to non coal mining are listed above. Emissions from drilling, blasting activity are temporal and restricted to the working area/ lease boundary.</p> <p>Fugitive emissions are generated from the transportation of ore from mine working face to crushing plant/loading area, etc.</p> <p>Major non-coal mines in India are transporting ore from the mine to loading plant by conveyor. Also mineral transportation loading area to beneficiation plant is through rail.</p> <p>A portion of the ore is being transported by road.</p>

	<p>crops located on either side of the road in case if proper control measures are not implemented.</p> <p>Drilling and blasting of Overburden (OB) benches create temporary emissions and restricted to the working area/ lease boundary.</p> <p>Transportation of OB from working area to dump will create fugitive emissions and these are restricted to lease boundary.</p> <p>In case if any habitation falls in downwind side and located close to the mine, then these continuous fugitive emissions due to haul roads may create problem to the habitation.</p> <p>Many of the coal mines are located close proximity to habitation.</p>	<p>Fugitive emissions are generated due to the transportation of the mineral by road.</p> <p>Emissions from the mine along with fugitive emissions are restricted to mine lease boundary. Majority of the non-coal mines are located away from the habitation. Hence the impact of emissions on the habitation is less compared to coal mines.</p>
Water Pollution	<p>Sources of water pollution:</p> <ol style="list-style-type: none"> 1. Overburden flowing from the dumps to nearby Rivers/Nallahs 2. Mine workings intersecting ground water 3. Water from washing of HEMMs at workshop <p>Most of the coal mines in India are along the River valleys. If control measures such as stabilisation of the dumps, construction of embankment to protect the River/Nallah, garland drains, toe walls are not implemented, the material from the OB dumps will flow to the nearby River/Nallah and siltation will occur and the water quality will be degraded.</p>	<p>Sources of water pollution:</p> <ol style="list-style-type: none"> 1. Surface run off from overburden dump 2. Effluent from tailing dam/ wet processing of ore 3. Water from HEMM workshop <p>Surface run off during the monsoon season from mine workings and OB dumps will flow into the nearby water bodies and change the color of the water body and contaminate water.</p> <p>Tailings due to processing of ore will get deposited in the tailing dam/tailing pond and if the material from tailing dam is not removed</p>

	<p>Water seepage will occur if the mine workings intersect the ground water. The water is to be pumped from the working area to surface tanks for carrying out the mining operation.</p> <p>This water needs to be routed through sedimentation ponds for settling of sediments before using it for irrigation or supplying to nearby agriculture fields.</p> <p>The water from workshop contains and Oil & Grease. The same needs to be removed before reuse.</p>	<p>periodically, then water flowing from the tailing dam into the nearby water body will contaminate the water body.</p> <p>The water from workshop contains and Oil & Grease. The same needs to be removed before reuse.</p>
Waste Management	<p>Surface run off from the OB dumps will result siltation of nearby water body along with degradation of water quality.</p> <p>It will impact the surrounding agricultural land.</p>	<p>Surface run off flowing from the waste dumps will change the color of the nearby water body. If the mine is located in the forest area, then run off flowing from the waste dump area will deposit the overburden all over the forest area.</p> <p>Also the surface runoff may carry out the overburden to nearby agricultural fields and productivity will be reduced.</p>
Land Degradation	<p>Land use pattern of the land will change with the mining activity. If the area involves agriculture land, habitation, then there will be permanent change of land use which cannot be restored back to initial status.</p>	
Biological Environment	<p>Mining operations will impact the Flora/Fauna of nearby forest area due to vibrations, noise and fugitive emissions.</p>	<p>Majority of the non-coal mine (Iron, Bauxite, etc.) projects are located in forest area, hence the mining operations will impact the flora and fauna of the nearby forest area.</p>
If,		

AAQ	Predicted air quality parameters are within the prescribed norms	Predicted air quality parameters are within the prescribed norms
Transportation	Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.	Mineral/ore transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.
Mining	Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go.	Deployment of Surface miners.
PH	Public hearing already conducted for the total mine lease area involved and no more area is required for the proposed expansion.	Public hearing already conducted for the total mine lease area involved and no more area is required for the proposed expansion. No lateral expansion in ML area
	Compliance status of EC conditions monitored by the concerned Regional Office of this Ministry is found to be satisfactory.	Compliance status of EC conditions monitored by the concerned Regional Office of this Ministry is found to be satisfactory.
Compliance of earlier EC	Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.	Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, orders of SC in Common Cause, etc. are satisfactorily fulfilled.
Then,		
Allowable % of expansion	The proposed expansion can go up to a maximum of 40% of capacity, wherein the last public hearing was conducted.	The proposed expansion can go up to a maximum of ---- capacity, wherein the last public hearing was conducted.

No lateral expansion	There is no increase in area for the proposed expansion vis-a-vis the area in EC, wherein last public hearing was conducted.	There is no increase in area for the proposed expansion vis-a-vis the area in EC, wherein last public hearing was conducted.
Transport	Coal transport is through conveyor system up to the silo and loading to railway wagons, and not by road.	Mineral transport is through conveyor system up to the silo and loading to railway wagons, and not by road.
	The EAC shall carry out the due diligence on all the parameters mentioned in para 3 above, and make its recommendations accordingly.	The EAC shall carry out the due diligence on all the parameters mentioned in para 3 above, and make its recommendations accordingly.
Third-party verification	EAC may consider the need for a third party study through an expert agency in a time bound manner, after grant of EC.	EAC may consider the need for a third party study through an expert agency in a time bound manner, after grant of EC.

7. Based on the presentation and discussions the views of the EAC are as follows:

- i. The proposals in the non-coal mining sector is unlike coal mining, diverse in nature in respect of shallow deposits; deep seated deposits; magnitude of mining; major minerals, minor minors, strategic minerals, replenish deposits, etc.
- ii. The coal mines are generally operated by the PSUs and big corporates, whereas the non-coal mines, the operators of very wide range including Government, PSU and Private, therefore the infrastructure and organization structure available is unlike coal mining.
- iii. DMM, IBM and DGMs these three agencies also regulate the mining of minerals unlike the coal mining by DGMS alone.
- iv. The committee is of the view that cannot discriminate the minerals.
- v. Public hearing is major concerned for any new or expansion activity.
- vi. Ministry of Mines should send comprehensive proposal in the matter.
- vii. Ministry of Mines shall workout the dispensation of PH to which minerals.
- viii. The committee noted that there were litigations filed before Hon'ble Supreme Court on the one-time capacity permissions issued in the coal mining.

8. After detailed deliberations, the committee is of the view that in case of Ministry of Mines submit the detailed proposal including justification; proposed

mineral sector based on the requirement in consultation with IBM, if desired, the matter can be further deliberated.

List of member of Expert Appraisal Committee Participated through VC

S.No	Member Name	Member Address	Designation	12th June
1	Dr. S.R. Wate	Add. 148/149, Nagar Vikas Society, Narendra Nagar, Nagpur-440015, Maharashtra	Chairman	Yes
2	Shri.Sharath Kumar Pallerla	3rd Floor, Vayu Block, Indira Paryawaran Bhawan, MoEF&CC, Jorbhag, New Delhi-11003	Member Secretary	Yes
3	Shri B Ramesh Kumar	H-No. 6-1-134/6, Balram Compound, Padmarao Nagar, Secundrabad-500025, Andhra Pradesh	Member	Yes
4	Prof. S. Ramakrishna Rao	50-120-9/1, Tulasi Mani Regency North Extension, Seethammadhara, Visakhapatnam - 530013 Andhra Pradesh.	Member	Yes
5	Shri Santosh Gupta	Flat No. 405, Block –B, Gaur Green Vista, Nyay Khand -1, Indrapuram, Ghaziabad-201014	Member	Yes
6	Dr. (Ms.) Asha Rajvanshi	Wildlife Institute of Inida, Chandrabani, Dehradun-248001	Member	No
7	Dr. Ajay Deshpande	Building A-26, Flat-403, Happy Valley Homes, Manpada, Ghodbunder Road, Thane (West) - 400610, Maharashtra	Member	Yes
8	Shri G.P. Kundargi	Plot No. 32, MOIL Vatika, Chicholi Road, Fetri, Nagpur 441501, Maharashtra	Member	Yes
9	Dr. A.N. Malhotra	C-6, Subhavna Niketan, Road No. 41, Pitampura, Delhi-110034	Member	Yes
10	Dr. Gurdeep Singh	Centre of Mining Environment, Department of Environmental Science & Engg. Indian Institute of Technology (Indian School of Mines), Dhanbad-826004	Member	No

11	Dr. Parimal Chandra Bhattacharjee	A/3 Asiyana Housing Complex Maligaon, Guwahati-781011, Assam	Member	No
12	Prof. MukeshKhare	Department of Civil Engineering, IIT, Delhi	Member	No
13	Mr. V. K. Soni	Government of India, Ministry of Earth Sciences, India Meteorological Department, Mausam Bhawan, Lodi Road, New Delhi – 110003	Member	Yes
14	Shri Peeyush Sharma	Controller of Mines, IBM Block D, Second Floor, Indira Bhavan, Civil Lines, Nagpur - 440001	Member	Yes
15	Sh. Aftab Ahmed	Representative of DGMS Head Office, Sardar Patel Nagar, Dhanbad, Jharkhand 826001	Member	Yes
16	Sh. B.S Soda	ADM, Jaipur – represented on behalf of Rajasthan State Government	Special Invitee	Yes

Re: Final draft of Special EAC held on 12th June, 2020 - Submitting for approval - Regarding

From : satishwate@gmail.com

Sat, Jun 20, 2020 03:35 PM

Subject : Re: Final draft of Special EAC held on 12th June, 2020
- Submitting for approval - Regarding

To : Sharath Kumar Pallerla <sharath.kr@gov.in>

Minutes of 12 th June approved.

Satish Wate
Chairman EAC Non Coal

Sent from my iPhone

On Jun 20, 2020, at 1:19 PM, Sharath Kumar Pallerla <sharath.kr@gov.in> wrote:

Dear sir,
Please find attached herewith final draft of Special EAC held on 12th June, 2020 for kind perusal and approval to upload on the website
Regards

SHARATH KUMAR PALLERLA
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<Minutes-Special EAC-12 June-2020.docx>
