

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

SUMMARY RECORD OF 13th MEETING OF THE COMMITTEE OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF NON-COAL MINING PROJECTS CONSTITUTED UNDER THE EIA NOTIFICATION, 2006.

The 13th 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 **January 30-31, 2020**. The list of participants is annexed herewith. After welcoming the Committee Members, discussion on each of the Agenda Items was taken up ad-seriatim.

1.1 Deliberation & Circulation on the Minutes of the 12th EAC Meeting held during December 19-20,2020

The Minutes of the 12th Meeting of EAC held during **December 19-20, 2019**, were circulated to the members of the Committee. The Committee made brief deliberations on the proposals placed in the last meeting and approved the same with the following amendments:

The Member Secretary informed the Committee that in Minutes of the Meeting uploaded for agenda item no 2.18 in the 12th EAC meeting held on 19-20 December, 2019 wherein the proposal of M/s Sarda Mines Pvt Ltd for Iron Ore project in para 1, last line may be corrected as "the validity of mining lease is till 28.08.2020 shall be read as" The validity of mining lease is till 13.08.2021.

In agenda item 2.6 serial no 20(i) line no.2 cement plant should be read as Beneficiation plant.

In agenda item 2.10 file no may be read as J-11015/63/2008-IA-II(M) instead of J-11015/63/2018-IA-II(M)

2.1 Mining of 4.0 Million TPA of Limestone from Chintalayapalle Limestone Mine [ML Area 491.55 Ha] located at Village-Chintalayapalle & Itikyala, Tehsil-Kolimigundla, District- Kurnool, State- Andhra Pradesh by M/s. The Ramco Cements Limited [Proposal No IA/AP/MIN/62749/2017; File No J-11015/15/2017-IA. II (M); Consultant: B.S. ENVI-TECH (P) Ltd]-EC Regarding.

The proposal of M/s The Ramco Cements Limited is for production of 4.0 Million TPA of Limestone from Chintalayapalle Limestone Mine [ML Area 491.55 Ha]

located at Village-Chintalayapalle & Itikyala, Tehsil-Kolimigundla, District-Kurnool, and State- Andhra Pradesh. The mine lease area falls in the Survey of India Topo-Sheet No. 57/I/4. The latitudes and longitudes of the Mine lease fall between Latitudes 15° 01' 20.5" N to 15° 02' 37.7" N & Longitudes 78° 05' 26.1" E to 78° 07' 06.4" E.

2. As per EIA Notification dated 14th September, 2006 as amended from time to time, the project falls under Category-A Project as the mining lease area (491.55 Ha) is more than 100 Ha.
3. The Project Proponent applied online on 23.02.2017 vide proposal no IA/AP/MIN/62749/2017 for prescribing Term of Reference (ToR) and submitted Form-1 and Pre-Feasibility report. The proposal was considered in EAC meeting held on 20-21 March, 2017 [P.117-120/c] and EAC in its meeting held on 18-19 September, 2017 recommended the proposal for prescribing Term of Reference (ToR). The ToR letter was issued on 06.10.2017. The Project Proponent applied vide proposal No. IA/AP/MIN/62749/2017 for grant of EC online on 14.08.2019 and submitted the EIA Report after conducting the Public Hearing. The proposal was placed in EAC Meeting held on 24-25 September, 2019, wherein the Committee **returned in present form** as the PP did not upload the complete documents on the PARIVESH Portal. PP applied afresh in Form-2 vide proposal No IA/AP/MIN/62749/2017 on 28.12.2019 and submitted EIA/EMP Report. The proposal is now placed in EAC meeting held during 30-31 January, 2020 wherein the EAC deliberated on the following information submitted by PP.
4. The proponent submitted the mining lease was granted to erstwhile Madras Cements Limited vide G.O.Ms. No. 138 dt. 15.02.2000 over an extent of 491.55 Ha. In Chintalayapalle and Itikyala villages Kolimigundla Mandal, Kurnool district, Andhra Pradesh. The mining lease was executed vide proceeding No. 1333/M4/2000 dt. 09.08.2000. Madras Cements could not commence mining operations for the sluggishness in the market. In the meantime, the name of the Madras Cements Ltd., has been changed to "The Ramco Cements Limited" on 13.10.2015, vide GO MS No. 96, by Government of Andhra Pradesh. Now the Govt. of A.P. vide Memo No. 576/M.III(I)/2015 dt. 16.10.2015 had accorded M/s The Ramco Cements Limited (RCL henceforth), extension of time for period of 3 years, i.e. up to 13.10.2018 for commencement of Cement production, after obtaining all the necessary clearances from both the MoEF&CC and State PCB. Further extension of time is granted for 3 more years from the date of issue of the memo (i.e. upto 3.10.2021) to establish the cement plant for 4 mining leases vide Govt. Memo No.510020/2018/AI-MINES.III-INDS, dt. 04.10.2018.

5. The PP submitted that **Mining Plan and Progressive Mine Closure Plan** of this proposed mining lease area is approved by Indian Bureau of Mines, Nagpur vide letter no. AP/KNL/MP/LST-51/HYD dated 15.06.2018. PP submitted that the mine will be operated by means of opencast fully mechanized method of mining which includes deep hole drilling and blasting, loading the broken material by heavy machinery like hydraulic excavators and tippers for transporting the limestone to crusher by road. The limestone from the mine will be transported to the crusher proposed outside the mining lease area at 0.1 km in the northern direction. Limestone from the mine pit will be transported to the crusher by dumper / tippers and from crusher the limestone will be transported to the plant by dumper / tippers in initial stage and later by closed conveyor of 3.7 Km. The mine will be operated by two shifts for 300 days in a year. PP submitted that one crusher of 1000 tons/hour capacity will be installed outside lease area and the crushed material will be transported to the cement plants for captive use by road/belt conveyor. PP submitted there will be no dump re-handling.
6. PP submitted that at the **conceptual stage** the total area under mining will be 79.01 Ha, under infrastructure will be 0.10 Ha, Road & Ramps will be 1.1 Ha, under green belt 33.0 Ha and 378.34 ha area will be remains un-utilized. PP submitted that up to the end of life of mine 521800 m³ of top soil will be generated which will be used for afforestation all along the mine lease boundary in 7.5 m boundary & Road safety zone area, which is 33.0 Ha. PP submitted that the ultimate depth of mining is 29m (270 mRL), since there is no waste or sub-grade generation till the end of the life of the mine there is no proposal for backfilling the workout pits [P.381/c]. PP submitted that conceptual pit limit at the end of the lease life is tentative (up to 2030) and likely to change after exportation is completed and after issuance of the lease extension upto 2050. PP submitted that life of mine at present reserve will be around 10 years and may change based on future exploration.
7. The proposal was deliberated in earlier EAC and was deferred for following, for which PP has made its submission.
- (i) *PP needs to provide the source of water and if needed provide the copy of application made to concerned authorities for extraction of ground water. In case permission is not required reason for the same needs to be submitted. PP also needs to submit the compliance of Ministry's O.M No 21-103/2015-IA.III dated 2.11.2018. PP needs to submit the water balance for mines area through rain water*

harvesting measures. PP should submit a target for reduction in water consumption for the mines through use of latest water spraying system and rainwater harvesting measures. The Committee felt that the distance of mineral transportation from mines to crusher is very less and PP needs to optimize the water requirement as stated above. The budget for the same needs to be provided in EMP.

PP submitted that Ground water table occurs at a depth of 50m below ground level in summer i.e. 264 m RL as per the information from nearby villages and exploratory drilling carried out in the mine and during monsoon it is 40-45 m i.e. 255 -260 m RL. The workings are expected to reach ultimate depth of 29 m (275m RL), which is above the water table in the area. Hence there will not be any impact on ground water regime of the lease area and its surroundings. As per EAC observation the total water requirement for mining operations is reduced from 150 m³/day to 125 m³/day [100 KLD for dust suppression (100 KLD evaporation losses); 10 KLD for drinking & sanitation (2 KLD evaporation losses & 8 KLD waste water); 15 KLD for green belt (15 KLD evaporation losses)]. Water requirement will be initially supplied by Cement plant from Owk Reservoir and later rain water collected in the mine pit will be used. Permission from Water Resources Department, Govt. of Andhra Pradesh obtained for utilization of 2500 kLD of surface water from Owk Reservoir, vide Letter No. EE/SRBC Divn.No3/Owk/IWS/186 m dated 27/05/2019. With regard to rainwater harvesting potential PP submitted that total rainwater harvesting potential (Cement Plant & 4 mines) is 20.8 million m³, rainwater harvesting potential (subject mines) is 83375 m³/annum and annual water requirement is 45625 m³/annum (125 KLD x 356 Days). In addition to this PP submitted that RCL will form storage area from the worked out mining pit to store rainwater in the bottom benches (8m depth in 1 Ha –storage of rainwater) to store rainwater for use in operation and Rs 5 Lakh (Capital) & Rs 1.0 Lakh (Recurring) for the same. PP submitted that within 2 years of mine operation the mine will not require water from outside source. PP submitted that within one year measures such as i) Atomized water spray arrangement for the main haul roads leading to the mines, ii) Dust Bloc will be used for dust suppression on haulage roads of mines, iii) Drip irrigation for greenbelt and iv) Use of rain water once the mine pit is formed will be implemented to conserve water. PP submitted a budget of Rs 10 Lakh has been earmarked for providing atomised sprinklers along the main approach road from crusher to the mine pit for a distance of 2.0 KM.

PP has proposed to install conveyer belt from crusher to cement plant. The Committee is of the view that PP should submit an undertaking for installation of conveyer belt with 3 years of the grant of EC.

PP submitted that the conveyor belt will be installed within a period of 3 years. After deliberation in details, EAC suggested that the Cement Plant will be commissioned within 18 months, so all effort should be made to complete the construction and operationalization of conveyor belt before commissioning of cement plant, to avoid road transport, except in case of conveyor belt breakdown. PP agreed to explore the possibility and adhere with the timeline based on its technical feasibility.

(iii) The Committee previously observed that with respect to plantation plan PP needs to provide the photograph of area, area to be covered, density of plantation, geo-location, number of saplings, time line and type of species to be planted under green belt and afforestation program with budgetary allocation. Plantation plan for every 5 years covering all above mentioned points till the life of mine needs to be submitted for future monitoring. In addition to this Committee observed that under plantation, capital cost is high and recurring cost is less, reason for the same needs to be submitted.

PP submitted that area covered under plantation will be at the end of plan period 51.69 Ha over the life of mine [during plan period i.e. 2018-20 (3.0 Ha, 4500 saplings, budget Rs 1.485 Lakh Capital & Rs 6.0 Lakh recurring, location: Western side of the proposed mining area), 2020-2025 (6.5 Ha, 9750 saplings, budget Rs 3.218 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: Eastern and Northern part of 7.5m barrier zone), 2025-2030 (6.3 Ha, 9450 saplings, budget Rs 3.119 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: NW and Western part of the 7.5m barrier zone), 2030-2035 (6.7 Ha, 10052 saplings, budget Rs 3.317 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: One side from north to south of Road Barrier zone), 2035-2040 (7.5 Ha, 11250 saplings, budget Rs 3.713 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: Other side from north to south of Road Barrier zone), 2040-2045 (7.5 Ha, 11250 saplings, budget Rs 3.713 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: Southern side of Road Barrier and Nalla Barrier zone), 2045-2050 (7.5 Ha, 11250 saplings, budget Rs 3.713 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: Northern side of the Power line safety zone), and 2050-2054 (6.69 Ha, 10035 saplings, budget Rs 3.312 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: Southern side of the Power line safety zone). Over the life of mine total 51.69 Ha area will be covered under plantation/greenbelt by planting more than 77535 saplings with a budget of Rs 25.6 Lakh (Capital) & Rs 3.0 Lakh recurring/annum. PP also submitted the photograph of location where the plantation has already been started and will be carried out in future. PP submitted that density of

plantation will be 1500 saplings/ha. PP submitted that Capital cost under plantation will be Rs 26 Lakh & recurring will be Rs 3.0 Lakh. Total amount which will be spent on recurring cost for the life of the mine Rs 108 Lakhs.

Observation of EAC: The Committee is of the view that PP shall engage expert agency so that density of plantation may be maintained at 2500 sapling/annum

8. The PP submitted that out of 491.55 Ha of mining lease area 42.20 Ha is Government land and 449.35 Ha is private land. The PP has already acquired 411.271 Ha of private land and remaining 38.079 Ha is yet to be acquired. PP submitted that there is no forest land in the mining lease area. PP submitted that there is no forest land involved in the mining lease area. PP submitted that there is no wildlife sanctuary, national park, elephant/tiger reserves within 10 KM of the mining lease area.

Earlier EAC has observed that PP should submit the certificate from the concerned forest department and chief wildlife warden for involvement of forest land and proximity of wildlife sanctuary, national park, elephant/tiger reserves within 10 KM of the mining lease area. The name of mine should be clearly specified in the certificates and conservation plan.

PP submitted a letter vide Letter No: EFS02/15030/2/2018-FCA-2./FEC/PPCF dated – 11/05/2018 obtained from Principal Chief Conservator of Forests stating non-involvement of forest land. PP submitted that wildlife conservation plan approved Chief Wildlife Warden has mentioned that there are no wildlife sanctuary, national park, elephant /tiger reserves within 10 km radius.

9. PP previously submitted a letter RC. No. 129/2018 dated 16.04.2018 issued by Chief Conservator of Forest, Govt. of Andhra Pradesh wherein the list of flora and fauna in 10 KM study area was provided. In the same letter it has mentioned that there are two schedule-1 species viz. Black Buck & Peafowl is available in the study area. The PP also submitted that wildlife conservation plan for the schedule-1 species was approved by Chief Wildlife Warden vide letter No.9968/2018/WL-2 dated 15.07.2019 [P.1667/c]. The PP has earmarked a budget of Rs 577.5 Lakh (Capital) for the implementation of wildlife conservation plan which includes i) Rs 165 Lakh for conservation plan for the schedule-1 species, ii) Rs 200 Lakh for development of green belt in plant area, iii) Rs 187.5 Lakh development of green belt in the surrounding village of RCL Plant, iv) Rs 10.0 Lakh SMC work in Owk RF and Owl extension RF, v) Rs 40 Lakh for stabilization of nallha bank and SMC work in plant area.

EAC had observed that the conservation plan is approved for cement plant and thermal power plant and there is no mention of this mining lease in the same. PP reported that conservation plan is prepared for all the activities as the same is falling within 10 KM study area. But as the name/details of the project in question is not specifically mentioned in the approval letter and conservation plan the same will be added and uploaded on the PARIVESH Portal.

PP submitted the Modified covering letter No. Rc.No. 9968/2018/WL-2(i) Dt: 07.11.2019 issued by Prl. Chief Conservator of Forest (WL) & Chief Wildlife Warden wherein the details of Chintalayapalle Limestone Mine is specifically mentioned along cement plant, power plant and 3 other mines. PP submitted that approved budget for Wild Life Conservation by CWLW is Rs. 175 lakh (Common for cement plant, power plant and 4 Nos. of mining leases.). RCL has earmarked Rs. 10 lakh for each mine and balance budget of Rs 135 Lakhs is accounted under Cement Plant as the capital cost of Cement plant is high which is Rs 1500 crores.

10. The Primary baseline data for specific micro-meteorology data, ambient air quality, waste quality, noise level, soil and flora & fauna has been collected during Post Monsoon season i.e. **October to December, 2017**. The monitoring results of ambient air, surface water, soil, ambient noise and ground water for the month of October 2017-December 2017 have been reported and no major divergence was observed with respect to concentration values of various parameters of collected samples.

The Committee had asked Cumulative GLC values needs to be checked and particle size analysis of PM₁₀ & PM_{2.5} and its percentage allocation based on existing cement plant of Ramco and validation of dispersion model for its factual calculation needs to be done. Committee observed that ToR letter was issued on 06.10.2017 but PP has carried out baseline studies for the Month of October to December i.e. before the grant of ToR. The Committee also observed that consultant has submitted the accreditation certificate for the period from 28.05.2018 to 12.11.2019 but did not submit the NABET Certificate for the period in which baseline study was conducted. Further, PP did not submit the original test report of the air quality data and accreditation certificate of the lab from where samples were analyzed in the EIA Report the same needs to be provided.

PP submitted the analysis of Particle size of cement dust and Power plant boiler dust collected from the existing cement plant of Ramco Cements. Based on the particle size analysis, the emissions from the cement plant and Power plant were

ascertained. The cumulative impact of PM10 and PM2.5 ground level concentrations were validated from AERMOD – 9.8 Version. PP also submitted the modelled concentration and monitored concentration of PM₁₀ & PM_{2.5} which is well within the NAAQS limits but there is variation in modelled results Vs monitoring results (PM₁₀ – Variation - 22-49 % & PM_{2.5} – Variation - 30-56 %). PP submitted that variation is due to local activities. PP submitted that Impact Zone of Cement plant - 2.5 km and Impact Zone of Mine - mainly along the transport route. PP submitted that application for ToR was made on February, 2017; acceptance received from MoEF&CC on 10 Mar 2017, EAC appraisal of the TOR was on 20.03.2017 & 18.09.2017 wherein ToR was approved.

In addition to this PP also provided the location and frequency of monitoring which include i) **Ambient Air Quality** [(Mine site; 15°2'37.13"N, 78°6'6.00"E; PM₁₀, PM_{2.5}, SO₂ and NO₂; Once in a month by third party approved by MoEF&CC), (Itikyala; 15°2'55.23"N 78° 5'47.30"E ; PM₁₀, PM_{2.5}, SO₂ and NO₂; Once in a month by third party approved by MoEF&CC), (Kalvatala; 15° 3'26.07"N & 78° 8'26.73"E ; PM₁₀, PM_{2.5}, SO₂ and NO₂; Once in a month by third party approved by MoEF&CC), (Chintalayapalle; 15° 1'14.87"N & 78° 6'22.13"E ; Fugitive Dust; Once in six months by third party approved by MoEF&CC), (Kanakadripalle; 15° 2'45.59"N & 78° 4'18.07"E; Fugitive Dust; Once in six months by third party approved by MoEF&CC), ii) **Soil Quality** [(Mine site; 15°2'37.13"N, 78°6'6.00"E; Physico-chemical parameters, Organic content and Heavy Metals; Half Yearly), (Itikyala; 15°2'55.23"N 78° 5'47.30"E ; Physico-chemical parameters, Organic content and Heavy Metals; Half Yearly), (Kalvatala; 15° 3'26.07"N & 78° 8'26.73"E ; Physico-chemical parameters, Organic content and Heavy Metals; Half Yearly), (Chintalayapalle; 15° 1'14.87"N & 78° 6'22.13"E ; Physico-chemical parameters, Organic content and Heavy Metals; Half Yearly), (Kanakadripalle; 15° 2'45.59"N & 78° 4'18.07"E; Physico-chemical parameters, Organic content and Heavy Metals; Half Yearly), iii) **Surface water quality** [(Madavagu- upstream; 15° 3'41.08"N & 78° 7'36.43"E; pH, Temp, Conductivity, TSS & TDS, BOD & DO, MPN Coliform. Iron & Heavy Metals (Hg, Cd, Cr, Pb, Zn, As, Cu) ; Monthly), (Madavagu- Downstream; 15° 3'11.10"N & 78° 9'20.71"E; pH, Temp, Conductivity, TSS & TDS, BOD & DO, MPN Coliform. Iron & Heavy Metals (Hg, Cd, Cr, Pb, Zn, As, Cu); Quarterly),iv) **Ground Water Quality** (Itikyala; 15° 2'55.23"N & 78° 5'47.30"E ; pH, TSS, TDS, Fluoride and Boron & Heavy Metals; Monthly& Quarterly), (Kalvatala; 15° 3'26.07"N & 78° 8'26.73"E ; pH, TSS, TDS, Fluoride and Boron & Heavy Metals; Monthly& Quarterly), (Chintalayapalle; 15° 1'14.87"N & 78° 6'22.13"E ; pH, TSS, TDS, Fluoride and Boron & Heavy Metals; Monthly& Quarterly), (Kanakadripalle; 15° 2'45.59"N & 78° 4'18.07"E ; pH, TSS, TDS, Fluoride and Boron & Heavy Metals; Monthly& Quarterly),v) **Noise** (Mine site; 15°2'37.13"N, 78°6'6.00"E; Day-and Night time noise

Levels ; Once in a season (in dry weather)), (Itikyala; 15° 2'55.23"N & 78° 5'47.30"E ; Day-and Night time noise Levels ; Once in a season (in dry weather)), (Kalvatala; 15° 3'26.07"N & 78° 8'26.73"E ; Day-and Night time noise Levels ; Once in a season (in dry weather)), (Chintalayapalle; 15° 1'14.87"N & 78° 6'22.13"E ; Day-and Night time noise Levels ; Once in a season (in dry weather)), (Kanakadripalle; 15° 2'45.59"N & 78° 4'18.07"E ; Day-and Night time noise Levels ; Once in a season (in dry weather)).

11. The Project Proponent reported that the Andhra Pradesh State Pollution Control Board conducted **Public consultation/hearing** for the proposed project of M/s. The Ramco Cements Limited for Mining of 4.0 Million TPA of Limestone from Chintalayapalle Limestone Mine [ML Area 491.55 Ha] located at Village-Chintalayapalle & Itikyala, Tehsil-Kolimigundla, District- Kurnool, State- Andhra Pradesh on 08.02.2019 at 2.00 P.M. at the mine site Sy. No. 250, Chintalayapalle (V), Kolimigundla (M), Kurnool District of Andhra Pradesh. The advertisement for public hearing was published in "Eenadu" & "The New Indian Express" on 8.01.2019. The Public hearing was conducted under the chairmanship of Shri S. Satyanarayana, Collector & District Magistrate, District- Kurnool. The issues raised during public hearing were also deliberated during the meeting which includes setting up of cement plant, employment, drinking water facility, medical facility, skill development, infrastructure facility in school & village, implementation of pollution control measures, additional compensation, educational facilities, effect on agricultural crop production, road maintenance, employment to local people, etc. The PP inter-alia committed during public hearing that drinking water will be supplied to villages from Owl Reservoir through the pipeline proposed by them for the cement plant, construct hospital in the factory premises and will provide mobile ambulance facility for all surrounding villages, construction of compound wall, providing computers, construction of toilets for all schools existing in the surrounding villages.

Previously Committee observed that the concerned raised during PH needs to be addressed properly and for each activity committed during PH a proper action plan along with budgetary allocation and implementation timeline needs to be provided. The land in the ML is private land purchased by RCL and R&R is applicable. Land compensation issue was also raised in PH thus PP needs to address the same. In case already complied details of the same needs to be provided.

PP submitted that with respect land compensation the RCL have paid additional amount of Rs. 0.75 lakh per acre for all the lands purchased before 2008, through District Collector, Kurnool. Total Amount as additional compensation paid based

on PH for subject Mine is Rs 6.27 crores. To address the issues raised during PH, PP submitted that i) approximately Rs. 75 lakh is allocated for construction of hospital in our premises, ii) CER budget with respect to skill development (for this proposed mine) is Rs. 4.6 lakhs, iii) CER budget with respect to drinking water for local villages (for this proposed mine) is Rs. 15 lakhs, iv) CER budget with respect to education for local villages (for this proposed mine) is Rs. 22 lakhs, v) EMP allocation for pollution control as capital expenditure for this mine is Rs. 98 lakh and Rs. 33.2 lakh for recurring expenditure respectively, vi) Rs. 5 crore is allocated for construction of school in our premises, vii) EMP allocation for greenbelt development as capital expenditure for this mine is Rs. 26 lakh and Rs. 3 lakh for recurring expenditure respectively, viii) EMP allocation for rainwater harvesting as capital expenditure for this mine is Rs. 5 lakh and Rs. 1 lakh for recurring expenditure respectively, ix) EMP allocation for environmental monitoring as capital expenditure for cement plant is Rs. 2.7 crore and Rs. 0.4 crore for recurring expenditure respectively.

12. PP previously submitted that budget earmarked under Corporate Environmental Responsibility (CER) is Rs 52.0 Lakhs. Which include **Activity-1 Education** [i) provision for library facility in Chintalayapalli village (Rs 3.0 Lakh, timeline 1st year), ii) provision for sport material along with playground in Chintalayapalli village (Rs 3.0 Lakh, timeline 1st year & Rs 2.0 Lakh for 2nd Year),iii) construction of sport ground in Raghavarajupalli Village (Rs 3.0 Lakh, timeline 1st year), iv) Providing new toilets for school in Chintalayapalli village (Rs 2.0 Lakh, timeline 1st year)], **Activity-2 Roads & Other Infrastructures** [i) Construction of burial ground (Rs 2.0 Lakh, timeline 1st year), ii) Community Hall in Chintalayapalli village (Rs 5.0 Lakh for 2nd Year), iii) Laying of cemented roads in Raghavarajupalli Village (Rs 5.0 Lakh, timeline 1st year & Rs 5.0 Lakh for 2nd Year)], **Activity-3 Drinking Water** [i) Providing RO Plant in Chintalayapalli village (Rs 6.0 Lakh, timeline 1st year), ii) Hand bore to be re-bored along with digging of two additional bore wells in Raghavarajupalli Village (Rs 6.0 Lakh for 1st Year)], **Activity-4 Skill Development** [Providing skill development center in Itikyala Village (Rs 7.5 Lakh, timeline 1st year & Rs 2.5 Lakh for 2nd Year)].

The Committee previously observed that as per MoEF&CC O.M. No. 22-65/2017-IA.III dated 1.05.2018 considering the project cost as 10.75 Cr the amount under CER comes out to be Rs 21.5 Lakh but PP has proposed Rs 52.0 Lakh under CER. Committee is of the view that cost of land needs to be added in the Project cost and based on the total cost CER needs to be revised.

PP submitted that project cost is revised from Rs 10.75 Crores to Rs 29.33 crores (Land cost: Rs 12.31 Crores + Rs 6.27 crores additional compensation). CER is revised based on revised capital cost of Rs. 29.33 crores. Revised CER budget increased from Rs. 21.5 lakhs to Rs. 62.0 lakhs which include **Activity-1 Education** [i) provision for library facility in Chintalayapalli village (Rs 3.0 Lakh, timeline 1st year), ii) provision for sport material along with playground in Chintalayapalli village (Rs 1.0 Lakh, timeline 1st year & Rs 1.0 Lakh for 2nd Year), iii) construction of Compound wall in Itikyala school (Rs 15.0 Lakh, timeline 2nd year), iv) Providing new toilets for school in Chintalayapalli village (Rs 2.0 Lakh, timeline 1st year)], **Activity-2 Roads & Other Infrastructures** [i) Construction of burial ground (Rs 2.0 Lakh, timeline 1st year), ii) Community Hall in Chintalayapalli village (Rs 5.0 Lakh for 2nd Year), iii) CCTV Camera (Rs 1.2 Lakh, timeline 1st year)], **Activity-3 Drinking Water** [i) Providing water pipeline to villagers (Rs 15.0 Lakh, timeline 1st year), **Activity-4 Health** [Ambulance (Rs 12.0 Lakh, timeline 1st year], **Activity-5 Skill Development** [Providing skill development center in Itikyala Village (Rs 2.6 Lakh, timeline 1st year & Rs 2.0 Lakh for 2nd Year)].

13. PP submitted that R&R Plan is not applicable for this project as there is no habitation inside the mining lease area.

The Committee previously observed that land in the ML is private land purchased by RCL and R&R is applicable. Land compensation issue was also raised in PH thus PP needs to address the same. In case already complied details of the same needs to be provided.

PP submitted that with respect land compensation the RCL have paid additional amount of Rs. 0.75 lakh per acre for all the lands purchased before 2008, through District Collector, Kurnool. Total Amount as additional compensation paid based on PH for subject Mine is Rs 6.27 crores. PP submitted that project cost is revised from Rs 10.75 Crores to Rs 29.33 crores (Land cost: Rs 12.31 Crores + Rs 6.27 crores additional compensation).

14. Project Proponent previously submitted that the budget earmarked for **Environmental Management Plan (EMP)** shall be ₹ 80.0 Lakh (Capital) & ₹ 32.0 Lakh (recurring/annum) and the same is now revised to ₹ 98.0 Lakh (Capital) & ₹ 33.2 Lakh (recurring/annum) which includes i) Rs 40.0 Lakh (Capital) (timeline 1st year) & Rs 10.0 Lakh (recurring) for Air Pollution Control Measures - Dust Suppression Measures (Atomised Water spray system and water tankers), ii) Rs 11.0 Lakh (Capital) (timeline 1st year) & Rs 18.0 Lakh (recurring) for Environment Monitoring, iii) Rs 26.0 Lakh (Capital) & Rs 3.0 Lakh (recurring) for Green Belt

Development (time line 0-36 year), iv) Rs 6.0 Lakh (Capital) & Rs 1.2 Lakh (recurring 6th year onwards) for Occupational Health Surveillance, v) Rs 10.0 Lakh (capital) (timeline 1st year) Wildlife Conservation Plan, and vi) Rs 5.0 Lakh (Capital) (1st year) & Rs 1.0 Lakh (recurring) for Rainwater Harvesting Structures.

15. PP submitted that the budget earmarked under Occupational Health plan is Rs 6.0 (Capital) & Rs 1.2 Lakh (Recurring) which includes Rs 1.5 Lakh for personal protective equipments for all workers (120 workers), Rs 0.5 Lakh for sign boards, Rs 4.0 Lakh for procurement of equipment for carrying out blood cell count. Rs 1.2 lakh (recurring) will be spent for carrying out periodical medical examination of the workers.
16. The consultant has submitted an undertaking that all ToR points prescribed by MoEF&CC has complied with in the preparation of EIA/EMP Report. Consultant provided list of expert engaged in the preparation of EIA/EMP and undertake that information provided in the statement is factually correct. PP also submitted an undertaking that ToR points prescribed by MoEF&CC is addressed in the EIA/EMP Report and the information and data submitted are factually correct and **The Ramco Cements Limited** owns the content of the report.

Committee previously observed that PP needs to submit i) an undertaking by the way of an affidavit to comply with the Common Cause Order and other statutory requirements in pursuant to O.M. dated 03.05.2018, ii) undertaking that all the data and information given in the application, enclosures, and other documents are true to the best of my knowledge and belief and PP is aware that if any part of the data and information submitted is 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, iii) Consultant needs to submit an undertaking that EIA/EMP Report is prepared by them and data and information provided in the same is factually correct and they are completely accountable for the same if any part of the data and information submitted is found to be false or misleading at any stage then Ministry may take necessary action through QCI-NABET including cancellation of accreditation.

PP submitted an undertaking by the way of an affidavit bearing No CH 339841 dated 29.11.2019 to comply with the Common Cause Order and other statutory requirements in pursuant to O.M. dated 03.05.2018. PP also submitted an undertaking that conveyor belt shall be installed within 3 years of grant of EC [P.1118/c]. PP submitted an undertaking that all the data and information given in the application, enclosures and other documents of EIA/EMP Report are true to

best of their knowledge and belief and RCL is aware that if any part of the data and information submitted is 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 RCL's risk. The Consultant also submitted an undertaking that data and information provided in the report is factually correct to the best of BSET knowledge and beliefs and BSET is completely accountable for the same if any part of the data and information submitted is found to be false or misleading at any stage. MoEF&CC may take necessary action through QCI-NABET including cancellation of accreditation.

17. Project Proponent submitted that the total project cost shall be ₹ 29.33 Crore and shall give direct employment to 120 persons and indirect to 200 persons.
18. Based on the discussion held and document submitted the Committee **recommended** the proposal of **M/s. The Ramco Cements Limited for limestone production of 4.0 Million TPA (ROM) & 521800 m3 of top soil over the life of mine from Chintalayapalle Limestone Mine [ML Area 491.55 Ha] located at Village-Chintalayapalle & Itikyala, Tehsil-Kolimigundla, District- Kurnool, State- Andhra Pradesh**. In addition to Standard EC Conditions as per Ministry's O.M. No. 22-34/2018-IA.III dated 08.01.2019, the Committee also prescribed the following specific conditions for this project:
 - 1) PP shall install conveyor belt from mines to cement plant and transportation is only through conveyor belt except in the case of maintenance & breakdown of conveyor belt, road transportation shall be carried out. PP shall keep the record of road transportation.
 - 2) PP shall carry out plantation on 51.69 Ha over the life of mine [during plan period i.e. 2018-20 (3.0 Ha, 4500 saplings, budget Rs 1.485 Lakh Capital & Rs 6.0 Lakh recurring, location: Western side of the proposed mining area), 2020-2025 (6.5 Ha, 9750 saplings, budget Rs 3.218 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: Eastern and Northern part of 7.5m barrier zone), 2025-2030 (6.3 Ha, 9450 saplings, budget Rs 3.119 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: NW and Western part of the 7.5m barrier zone), 2030-2035 (6.7 Ha, 10052 saplings, budget Rs 3.317 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: One side from north to south of Road Barrier zone), 2035-2040 (7.5 Ha, 11250 saplings, budget Rs 3.713 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: Other side from north to south of Road Barrier zone), 2040-2045 (7.5 Ha, 11250 saplings, budget Rs 3.713 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: Southern side of Road Barrier and Nalla Barrier zone), 2045-2050 (7.5 Ha, 11250 saplings, budget Rs 3.713 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: Northern side of the Power line safety zone), and 2050-2054 (6.69 Ha, 10035 saplings, budget Rs 3.312 Lakh Capital & Rs 3.0 Lakh recurring/annum, location: Southern side of the Power line safety zone). PP shall ensure that over the life of

mine total 51.69 Ha area will be covered under plantation/greenbelt by planting more than 77535 saplings with a budget of Rs 26.0 Lakh (Capital) & Rs 3.0 Lakh recurring/annum (total amount which will be spent on recurring cost for the life of the mine Rs 108 Lakhs). PP shall engage expert agency so that density of plantation may be maintained at 2500 sapling/annum. The budget earmarked for plantation shall be kept in separate bank account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 3) Total water requirement for mining operations should not be more than 125 m³/day [100 KLD for dust suppression (100 KLD evaporation losses); 10 KLD for drinking & sanitation (2 KLD evaporation losses & 8 KLD waste water); 15 KLD for green belt (15 KLD evaporation losses)]. Water requirement shall be met initially from Cement plant from Owk Reservoir and later rain water collected in the mine pit shall be used. PP shall form storage area from the worked out mining pit to store rainwater in the bottom benches (8m depth in 1 Ha – storage of rainwater) to store rainwater for use in operation and Rs 5 Lakh (Capital) & Rs 1.0 Lakh (Recurring) for the same. PP shall not use outside water supply within 2 years of mine operation. PP within one year of mine operation shall take measures such as i) Atomized water spray arrangement for the main haul roads leading to the mines, ii) Dust Bloc will be used for dust suppression on haulage roads of mines, iii) Drip irrigation for greenbelt and iv) Use of rain water once the mine pit is formed will be implemented to conserve water etc., to conserve water. Budget of Rs 10 Lakh earmarked for providing atomised sprinklers along the main approach road from crusher to the mine pit for a distance of 2.0 KM shall be spent within 1 year. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 4) The amount proposed for conservation plan is Rs 10 Lakh for this mine shall be deposited in the government account as per communication received from State Government. PP shall submit the requisite documents to Regional Office of MoEF&CC. Budget
- 5) Budget earmarked for Corporate Environment Responsibility (CER) is Rs. 62.0 lakhs which include Activity-1 Education [i) provision for library facility in Chintalayapalli village (Rs 3.0 Lakh, timeline 1st year), ii) provision for sport material along with playground in Chintalayapalli village (Rs 1.0 Lakh, timeline 1st year & Rs 1.0 Lakh for 2nd Year), iii) construction of Compound wall in Itikyala school (Rs 15.0 Lakh, timeline 2nd year), iv) Providing new toilets for school in Chintalayapalli village (Rs 2.0 Lakh, timeline 1st year)], Activity-2 Roads & Other Infrastructures [i) Construction of burial ground (Rs 2.0 Lakh, timeline 1st year), ii) Community Hall in Chintalayapalli village (Rs 5.0 Lakh for 2nd Year), iii)

CCTV Camera (Rs 1.2 Lakh, timeline 1st year), Activity-3 Drinking Water [i) Providing water pipeline to villagers (Rs 15.0 Lakh, timeline 1st year), Activity-4 Health [Ambulance (Rs 12.0 Lakh, timeline 1st year), Activity-5 Skill Development [Providing skill development center in Itikyala Village (Rs 2.6 Lakh, timeline 1st year & Rs 2.0 Lakh for 2nd Year)]. At the end of life of mine if any amount remains unspent than the same should be spent in consultation with local administrations for the development of nearby villages. The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of CER activities along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, photographs & Geo-location of the infrastructures/facilities developed, etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 6) Budget earmarked for Environmental Management Plan (EMP) shall be ₹ 80.0 Lakh (Capital) & ₹ 32.0 Lakh (recurring/annum) and the same is now revised to ₹ 98.0 Lakh (Capital) & ₹ 33.2 Lakh (recurring/annum) which includes i) Rs 40.0 Lakh (Capital) (timeline 1st year) & Rs 10.0 Lakh (recurring) for Air Pollution Control Measures - Dust Suppression Measures (Atomised Water spray system and water tankers), ii) Rs 11.0 Lakh (Capital) (timeline 1st year) & Rs 18.0 Lakh (recurring) for Environment Monitoring, iii) Rs 26.0 Lakh (Capital) & Rs 3.0 Lakh (recurring) for Green Belt Development (time line 0-36 year), iv) Rs 6.0 Lakh (Capital) & Rs 1.2 Lakh (recurring 6th year onwards) for Occupational Health Surveillance, v) Rs 10.0 Lakh (capital) (timeline 1st year) Wildlife Conservation Plan, and vi) Rs 5.0 Lakh (Capital) (1st year) & Rs 1.0 Lakh (recurring) for Rainwater Harvesting Structures. The location and frequency of monitoring include i) Ambient Air Quality [(Mine site; 15°2'37.13"N, 78°6'6.00"E; PM₁₀, PM_{2.5}, SO₂ and NO₂; Once in a month by third party approved by MoEF&CC), (Itikyala; 15°2'55.23"N 78° 5'47.30"E ; PM₁₀, PM_{2.5}, SO₂ and NO₂; Once in a month by third party approved by MoEF&CC), (Kalvatala; 15° 3'26.07"N & 78° 8'26.73"E ; PM₁₀, PM_{2.5}, SO₂ and NO₂; Once in a month by third party approved by MoEF&CC), (Chintalayapalle; 15° 1'14.87"N & 78° 6'22.13"E ; Fugitive Dust; Once in six months by third party approved by MoEF&CC), (Kanakadripalle; 15° 2'45.59"N & 78° 4'18.07"E; Fugitive Dust; Once in six months by third party approved by MoEF&CC), ii) Soil Quality [(Mine site; 15°2'37.13"N, 78°6'6.00"E; Physico-chemical parameters, Organic content and Heavy Metals; Half Yearly), (Itikyala; 15°2'55.23"N 78° 5'47.30"E ; Physico-chemical parameters, Organic content and Heavy Metals; Half Yearly), (Kalvatala; 15° 3'26.07"N & 78° 8'26.73"E ; Physico-chemical parameters, Organic content and Heavy Metals; Half Yearly), (Chintalayapalle; 15° 1'14.87"N & 78° 6'22.13"E ; Physico-chemical parameters, Organic content and Heavy Metals; Half Yearly), (Kanakadripalle; 15° 2'45.59"N & 78° 4'18.07"E; Physico-chemical parameters, Organic content and Heavy Metals; Half Yearly) [P.1950/c], iii) Surface water quality [(Madavagu- upstream; 15° 3'41.08"N & 78° 7'36.43"E; pH, Temp, Conductivity, TSS & TDS, BOD & DO, MPN Coliform. Iron & Heavy Metals (Hg, Cd, Cr, Pb, Zn, As, Cu) ; Monthly), (Madavagu- Downstream; 15° 3'11.10"N & 78° 9'20.71"E; pH, Temp, Conductivity, TSS & TDS, BOD & DO, MPN Coliform. Iron & Heavy Metals (Hg, Cd, Cr, Pb, Zn, As, Cu); Quarterly),iv) Ground Water Quality (Itikyala; 15° 2'55.23"N & 78° 5'47.30"E ; pH, TSS, TDS, Fluoride and Boron & Heavy Metals; Monthly&

Quarterly), (Kalvatala; 15° 3'26.07"N & 78° 8'26.73"E ; pH, TSS, TDS, Fluoride and Boron & Heavy Metals; Monthly& Quarterly), (Chintalayapalle; 15° 1'14.87"N & 78° 6'22.13"E ; pH, TSS, TDS, Fluoride and Boron & Heavy Metals; Monthly& Quarterly), (Kanakadripalle; 15° 2'45.59"N & 78° 4'18.07"E ; pH, TSS, TDS, Fluoride and Boron & Heavy Metals; Monthly& Quarterly),v) Noise (Mine site; 15°2'37.13"N, 78°6'6.00"E; Day-and Night time noise Levels ; Once in a season (in dry weather)), (Itikyala; 15° 2'55.23"N & 78° 5'47.30"E ; Day-and Night time noise Levels ; Once in a season (in dry weather)), (Kalvatala; 15° 3'26.07"N & 78° 8'26.73"E ; Day-and Night time noise Levels ; Once in a season (in dry weather)), (Chintalayapalle; 15° 1'14.87"N & 78° 6'22.13"E ; Day-and Night time noise Levels ; Once in a season (in dry weather)), (Kanakadripalle; 15° 2'45.59"N & 78° 4'18.07"E ; Day-and Night time noise Levels ; Once in a season (in dry weather)). The amount (except occupational health) proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 7) PP shall establish the Environment Management Cell separately for each plant/mines and engage sufficient number of qualified staff for the implementation of Environmental Clearance Conditions and other statutory requirements.
- 8) Budget earmarked under Occupational Health Plan is Rs 6.0 (Capital) & Rs 1.2 Lakh (Recurring) which includes Rs 1.5 Lakh for personal protective equipments for all workers (120 workers), Rs 0.5 Lakh for sign boards, Rs 4.0 Lakh for procurement of equipment for carrying out blood cell count. Rs 1.2 lakh (recurring) will be spent for carrying out periodical medical examination of the workers. The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed of implementation of occupational health plan along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged in implementation of Occupation Health Plan etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

2.2 Mawlong Limestone Mine with proposed production capacity of 1,20,001 TPA of Limestone (ROM), located near Ichamati village, East Khasi Hills District, Meghalaya (MLA 4.56 Ha) by M/s K.Singh Wann & Sons.

File No: J-11015/146/2018-IA. II (M) Proposal No: IA/ML/MIN/77659/2018

The proposal of M/s K.Singh Wann & Sons is for production of Limestone with proposed production capacity of 1,20,001 TPA(ROM) from the mine lease area of 4.56 Ha located near Ichamati village, East Khasi Hills District, Meghalaya. The mine lease area covered under Survey of India Toposheet No. 78 o/12 and falls between Latitude: 25°10'46.90" to 25°10'48.51" and Longitude: 91°41'51.55" to 91°41'51.30".

2. PP submitted that the project falls under Schedule 1(a) of mining and is a Category – 'A' project as per EIA notification 14th September, 2006 (amended time to time) as the mining lease area is located 2.68 km from Bangladesh International Border.
3. PP presented point-wise compliance of stipulated TOR. The PP applied online for grant of TOR on 22nd October, 2018 and submitted the Form-I and Pre-feasibility Report. The proposal was considered in the EAC in its meeting held during November 15-16, 2018 wherein the Committee recommended the TOR and the Ministry has granted TOR vide letter no. J-11015/45/2018-IA.II(M) dated 17 July, 2018 for Preparation of Environmental Impact Assessment (EIA) Report and Environmental Management Plan (EMP).
4. PP submitted the EIA/EMP Report to Ministry for seeking environmental clearance and the proposal was considered in the EAC in its meeting held on January 30-31, 2020. The deliberation held in the meetings are as follows.
5. PP submitted that total mine lease area is 4.56 Ha is private land. PP reported that the mining lease was granted on 14.12.2005. The Execution of mining lease was made on 13.03.2006 for 20 years and the same is valid till 12.03.2026. PP also submitted vide letter no KH/8/NOC/Limestone/41/Pt.IV/929 dated 27.06.2018 that the above said mine lease area is not a part of Reserve Forest and Protected by Divisional Forest Officer East Khasi Hills & R Bhoi (T) Division, Shillong. PP also reported that Consent to Establish No. MPCB/TB-66/2004/2004- 2005/06 dated 6th December 2004 has been issued from Meghalaya State Pollution Control Board. Latest Renewal of Consent to Operate from MSPCB vide letter no. MPCB/TB-66/2004/2015-16/31 dated 19th February 2018 is valid up to 31.3.2019.
6. PP submitted the Mining Plan and Progressive Mine Closure Plan of proposed mining lease area is approved by IBM vide letter no.IBM/GHY/MEG/EKH/LST-4 for the period of 2016-17 to 2020-21 for the production capacity of 1,20,001 TPA limestone for the mine lease area of 4.56 Ha. As per the approved mine plan the method of mining is opencast by a combination of manual and deployment of small machines. The Unit Operations to be involved are Drilling (by 34 mm Jack hammer), Blasting (by 25 mm x 200 mm slurry explosive cartridges and delayed detonators), Excavation (by 0.6 / 1 Cu.m Hydraulic excavator), Sizing of + 350 mm Limestone boulders (by breakers and also

manually to – 350 mm), Loading (by 1 Cu.m. wheel loaders), Transportation (by 10 – Tonne dump trucks). PP reported that as per the approved mine plan the total geological reserve are 2,10,637 Tonnes and the mineable reserve are 2,08,464 tonnes. Life of mine on the basis of reserve and proposed production capacity of limestone mineral is 1.76 years @1,20,001 TPA. PP reported that there will be no waste, IB generation during the Mining operations.

7. PP reported that the existing ground water level ranges will be 50M (AMSL) and the depth of the ore body is up to 30M, thus there will be no ground water intersection during the mining operations.
8. PP also submitted the inspection report vide letter no DMR/MM/ML/585/2015/Vol-1/1798 dated 28.01.2020 by the Directorate of Minerals Resources Shillong, Government of Meghalaya inter-alia stating that inspection has been carried out of the above mine lease area and the inspection revealed that no development work has taken place in the mining lease area. Further it appeared that scheduled commercial production in line with the approved mining plan has not yet commenced and the same may be treated as nil production since inception.
9. PP reported that at the conceptual stage out of 4.56 ha of lease area, about 2.744 ha will be under mining, 0.160ha will be storage for top soil, 0.122 ha will be infrastructure, 0.384ha will be roads, 0.520 will be green belt/Safety Zone plantation, 0.410 will be OB dump retain wall, 0.220 will be Garland Drain. PP reported that after conceptual plan total plantation including the green belt will be on 0.930ha (0.520ha for green belt + Afforestation on OB dump 0.410ha) along with the 2500 saplings per ha.
10. PP submitted that no forest land falls within the lease area. In support of this claim, PP submitted letter from Divisional Forest Officer, East Khasi Hills & R Bhoi(T) Division, Shillong. vide letter no. KH/8/NOC/Limestone/41/Pt.IV/929 dated 27.06.2018. PP further submitted that there is no Reserved, Protected Forest, National Park, Wildlife Sanctuary, Biosphere Reserves, Tiger Reserves, and Wildlife Corridors etc. within core zone and 10 km radius of the mining lease area. PP further submitted that no schedule I species (according to Wildlife Protection Act, 1972) found in the study area.
11. The project proponent submitted that there is no court case/litigation pending against the above project, no (R&R) is involved in this project because the entire area recommended for quarrying lease which is owned by M/s K.Singh Wann & Sons.
12. PP submitted that baseline data which includes i) Socioeconomic study , ii) Micro-meteorological monitoring in one of the representative location, iii)

Ambient air quality study comprising gaseous, particulate matter at 7 different locations, iv) Water quality analysis in 8 different locations (4 surface water samples and 4 ground water samples), v) Noise levels monitoring, vi) Soil quality analysis, vii) Flora & Fauna status, viii) Land use pattern study and ix) Hydrological study and study have been carried out systematically and meticulously as per relevant IS codes, CPCB, MoEF&CC guidelines during post monsoon October-January, 2018. The PP submitted that the existing Ambient Air Quality levels in the monitored locations for PM10, PM2.5, SO2 and NO2, are within the prescribed CPCB limits of 100 µg/m³, 60 µg/m³, 80 µg/m³ & 80 µg/m³.

13. PP submitted that the public hearing (PH) was conducted on 16.08.2019(11.00AM) at Ichamati village, Mawlong Sirdarship, East Khasi Hills District, Meghalaya Asst. Environmental Engineer, Meghalaya State Pollution Control Board(MSPCB), Shillong. The PH was chaired by Shri. M.B. Tongper, MCS, Additional District Commissioner, East Khasi Hills District, Meghalaya. PP submitted the point-wise action plans for PH issues. The majority of the people have extended their support to the Proposal and requested to provide the employment for the local people. PP has proposed Rs.0.3 lakhs for medical camps, Rs.2 lakhs for road maintenance regularly, Rs.0.5lakhs for School furniture, Rs.0.30 Lakhs for promotion of sports and organizing tournaments. 3.0 Lakhs for construction of Bus Stand/rest shelter, 0.5 Lakhs for plantation, Green belt Development Rs.0.84 Lakhs, in addition to above activities for CSR 6.1 lakhs with an increase of 7% yearly is also proposed.
14. PP reported that the total water requirement will be 31 KLD out of which 2.0 KLD for mining operations, 25.0 KLD for plantation and sprinkling in road for dust suppression, 2.0 KLD for drinking and sanitation purpose, 2.0 KLD for other purpose. 2.0 KLD drinking water will be sourced from the nearby village and rest of the water will be used for mining purpose which will be collected from accumulated surface water from quarry sump.
15. The total cost of the project will be 4.5 crore and the project shall create employment directly 21 people and indirectly 80 people. The Project Proponent submitted that the budget for occupational health and safety shall be Rs.0.3 lacs, Rs.0.2 lacs for Environmental awareness, 6.0 lacs for EMP. The PP has submitted the activities to be carried out under CER as per the provision of ministry OM no F.NO.22-65/2017-IA.III dated 1st May, 2018vide its letter dated 31.01.2020 and also submitted an undertaking as per the provision of ministry OM F.No.3-50/2017-IA.III(Pt.) dated 30th May, 2018.
16. Based on the discussion held and documents submitted by the PP, the Committee **recommended** the proposal for **production capacity of**

1,20,000 TPA of Limestone (ROM), located near Ichamati village, East Khasi Hills District, Meghalaya (MLA 4.56 Ha) by M/s K.Singh Wann & Sons for four years with total excavation to be limited to 2,08,464 tonnes with standard EC conditions and following specific condition.

- I. The EC is valid four years only from the date of grant of EC with total excavation to be limited to 2,08,464 tonnes.

2.3 Captive Limestone Mine of M/s. Shree Cement Limited (Karhi-Chandi Limestone Deposit) with Limestone Production Capacity of 1.5 Million TPA, 0.45 Million TPA Inter-Burden (Total Excavation: 1.95 Million TPA) with installation of Crusher of 1200 TPH in the mine lease area of 242.127 ha located at Villages- Karhi, Chandi and Khapradih, Tehsil – Simga, District- Balodabazar Bhatapara, Chhattisgarh

File No: J-11015/64/2017-IA-II(M); Proposal No: IA/CG/MIN/65291/2017; Consultant: J. M. EnviroNet Pvt. Ltd- Consideration of EC.

The proposal of M/s Shree Cement Limited is for Karhi-Chandi Limestone Deposit with production capacity of 1.5 Million TPA of limestone (ROM), 0.45 Million TPA Inter-Burden (Total Excavation: 1.95 Million TPA) with installation of Crusher of 1200 TPH in the mine lease area of 242.127 ha. The mine is located at Villages- Karhi, Chandi and Khapradih, Tehsil- Simga, District- Balodabazar-Bhatapara, Chhattisgarh. The mine lease area falls between the 21°36'12.247"N to 21°37'40.574"N and 82°01' 31. 413"E to 82°02' 34.111"E and located on the Survey of India Toposheet No. 64 K/2.

2. The proposal was placed in EAC meeting held during February 20-21, 2019 wherein the Committee **deferred** the proposal and asked PP to submit certain information. PP submitted the requisite information and deliberation was held in the committee as mentioned below:
 - (i) PP submitted that Shree Cement Limited has one captive operating limestone mine (Bharuwadih-Semaradih Mine) and one proposed captive limestone mine (Karhi-Chandi Mine) for catering limestone to two existing kilns and one proposed kiln adjacent to the captive mines in Balodabazar-Bhatapara district (Chhattisgarh). Cumulative effect of both captive mines and expansion of cement plant with captive power plant has been estimated considering various activities and the emission factors of Drilling, Blasting, Loading & Unloading, transportation, crushing, dumping and other allied activities besides emissions from all the stacks of cement plants and captive power plant. Ground Level Concentration (Incremental & Resultant) for different Scenarios for composite Integrated Cement Plant & Captive Mines has been estimated as follows:

Particular	Concentration ($\mu\text{g}/\text{m}^3$)			CPCB NAAQS Standards
	Baseline	Incremental	Resultant	
PM10	78.2	8.5	86.7	100
PM2.5	40.3	6.78	47.08	60
SO2	12.4	5.25	17.65	80
NO2	21.0	7.58	28.58	80

The Committee deliberated and noted that all the parameters are within the prescribed the CPCB NAAQS Standards.

- (ii) PP submitted that ground water levels of the study area in pre-monsoon & post-monsoon are varies from 2.70 to 32.25 m. Total ground water requirement for the existing cement plant + existing Bharuwadih-Semaradih lime stone mine is 1095000 cum per annum (3000 KLD) and for the proposed Karhi-Chandi lime stone mine would be 51750 cum per annum (150 KLD). The total ground water requirement of both mines and cement plant with CPP & Colony would be 1146750 cum per annum (3150 KLD). PP submitted that they have rain water harvesting system in the Cement plant and Housing colonies the same will recharge the ground water around 1262324 cum per annum.

The proposed expansion of existing cement plant and Bharuwadih-Semaradih limestone mine will have additional water requirement of 177025 cum per annum (485 KLD) which will be sourced from the rain water collected in the mine pits and earthen pond in plant area. The rain water collected in the mine pits of Bharuwadih-Semaradih mine would be 519632 cum per annum and in Karhi-Chandi mine would be 51818 cum per annum at 5th years. PP reported that the total estimated capacity of earthen pond in plant area for rain water collection is 100000 cum. PP estimated that the total rain water would be available in both mine and plant area is 674450 cum at 5th year. Further PP submitted that CGWA has granted ground water withdrawal permission for cement plant and Bharuwadih-Semaradih. lime stone mine would be 3000 KLD (1095000 cum per annum) and for proposed Karhi-Chandi LS Mine will be of 150 KLD (51750 cum/annum).

Observation of the EAC: PP submitted that CGWA has granted ground water withdrawal permission for cement plant and Bharuwadih-Semaradih lime stone mine would be 3000 KLD (1095000 cum per annum) and for proposed Karhi-Chandi LS Mine will be of 150 KLD (51750 cum/annum). However, the copy of the approval letter not submitted by the PP.

- (iii) There are total 89 families in the Chandi village having houses within the Mining Lease Area which will not be shifted as there will be no mining activities in that area.

S. no	Village	Government land (ha.)	Private land (ha.)	Purchased (ha.)	To be Purchased (ha.)
1.	Karhi	0.8755	22.835	1.740	21.095
2.	Chandi	18.4283	136.826	92.134	44.692
3.	Khapradih	1.0272	62.135	52.899	9.236
Total (ha.)		20.331	221.796	146.773	75.023

PP reported that the amount given against the purchased land is higher than the DLC and Market land as given below:

Village	DLC rate		Market rate		SCL Rate	
	Non-Irrigated	Road side	Non-Irrigated	Road side	Non-Irrigated	Road side
Chandi	1100000	1700000	1235000	1800000	3706500	
Karhi	1050000	1450000	1150000	1800000	3706500	
Khapradih	1200000	2150000	1300000	1900000	3706500	

PP mentioned that the total amount of compensation for land will be divided in three parts such as one-time partial payment (40%), fixed deposit (30%) and annuity (30%) and also mentioned that option will be explored for alternative land to land owners. PP further submitted that the total amount of compensation will be divided in three budget heads such as one-time partial payment, fixed deposit and annuity. Apart from the above PP also proposed following:

- i. PP will bear the entire cost for school education for all girl child studying in Govt. School of Village Karhi, Chandi and Khapradih which will include fees, books, uniform, bag and stationary. Approx. Budget is Rupees one lacs per annum.
- ii. PP will Contribute Rs. 11,000 for each girl marriage.
- iii. PP also proposed to provide sanitary napkin to all the girl child in Govt. School of village Karhi, Chandi and Khapradih with a budget 50,000 per annum.

iv. One lacs per annum to each Registered Govt. Gaushala of village Karhi, Chandi and Khapradih. Total budget would be three lacs per annum.

(iv) The proposed mining will pay Rs.8/ tonne of limestone under the District Mineral Fund (DMF). Total amount would be Rs.1.2 Cr/ Annum at full capacity which will be utilized by the local Administration for the development of the mine affected area.

(v) PP also submitted revised budget for CER of Rs 2.50 Cr in 3 years as per following action plan:

S.no	Activity	Budget
1	Public Health Programme	Rs. 47.00 Lacs (1 st yr- 22.50 Lacs + 2 nd yr 22.50 Lacs + 3 rd Yr - 2.00 Lacs)
2	Education and Sports Promotion	Rs. 50.0 Lacs (1 st yr - 18.0 Lacs + 2 nd yr - 18.0 Lacs + 3 rd Yr - 14.0 Lacs)
3	Training for Employment generation and livelihood for 600 people.	Rs. 61.05 Lacs (1 st yr - 27.65 Lacs + 2 nd yr - 16.40 Lacs + 3 rd yr- 17 Lacs)

3. Based on the discussion held and documents submitted by the PP, the Committee **recommended** the proposal for Captive Limestone Mine of M/s. Shree Cement Limited (Karhi-Chandi Limestone Deposit) with Limestone Production Capacity of 1.5 Million TPA, 0.45 Million TPA Inter-Burden (Total Excavation: 1.95 Million TPA) with installation of Crusher of 1200 TPH in the mine lease area of 242.127 ha located at Villages- Karhi, Chandi and Khapradih, Tehsil –Simga, District- Balodabazar Bhatapara, Chhattisgarh with standard EC conditions subjected to submission of CGWA approval letter for withdrawal of ground water- 3000 KLD (1095000 cum per annum) for cement plant and 150 KLD (51750 cum/annum) for proposed Karhi-Chandi LS Mine as claimed by PP :

(i) PP should maintain a buffer zone of 300 mtrs wide as barrier along the lease area in vicinity of Household and shall not do any mining operations in such buffer zone. This buffer zone should be developed with thick vegetation.

2.4 Lanjiberna Limestone and Dolomite Mine of M/s. OCL INDIA Limited with expansion in production of limestone from 4.2 million TPA to 9.5 million TPA, 0.08 million TPA of Dolomite and Rejects/Waste 7.42 Million TPA (Total Excavation: 17 MTPA) along with four existing crushers installed within mine lease area i.e. 400 TPH, 1200 TPH and 2x 200 TPH (aggregate) and installation of one new crusher of 1600 TPH in the mine lease area of 873.057 ha located at Villages-Alanda, Bihabandh, Jhagarpur, Kesramal, Raiberna, Katang, Dhauraada, Lanjiberna and Kukuda, Tehsil-Rajgangpur and Kutra, District Sundargarh, Odisha-Consideration of Environmental Clearance.

File No: J-11015/220/2016-IA-II (M), Proposal No: IA/OR/MIN/100679/2016;
Consultant: J. M. EnviroNet. Pvt. Ltd

The proposal of M/s. OCL India Ltd is for Lanjiberna Limestone and Dolomite Mine with expansion in limestone production capacity from 4.2 million TPA to 9.5 million TPA, Dolomite 0.08 million TPA and Rejects/Waste 7.42 million TPA (Total excavation 17.0 Million TPA) along with four existing crushers installed within mine lease area i.e. 400 TPH, 1200 TPH and 2x200 TPH (aggregate) and installation of one new crusher of 1600 TPH in the mine lease area of 873.057 ha. The mine lease area is located at Villages-Alanda, Bihabandh, Jhagarpur, Kesramal, Raiberna, Katang, Dhauraada, Lanjiberna and Kukuda, Tehsil-Rajgangpur and Kutra District- Sundargarh, Odisha. The mine lease area falls between Latitude-22^o14'31.96383"N to 22^o15'37.47389"N and Longitude-84^o29'10.73846"E to 84^o36'17.79270"E. The Survey of India toposheet Numbers are 76B/7, 76B/8, 76B/11 and 76B/12.

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.
3. PP reported that the environmental clearance was granted by MOEF&CC for existing production capacity 4.2 million TPA of limestone & 0.08, million tonnes of Dolomite vide letter No. J-11015/372/2007-IA.II(M) dated 28.04.2010. Further PP submitted that ToR proposal for the proposed expansion. The proposal was considered in the EAC in its meeting held during November 23-25, 2016 and the TOR has been granted by Ministry vide letter No. J-11015/202/2006-IA.II(M) dated 16th December, 2016. PP submitted the EIA/EMP report to Ministry for seeking environmental clearance. The project proposal is considered in the EAC in its meeting held November 27-28, 2019 wherein based on the presentation made by PP and the discussion held, the Committee **deferred** the proposal for want of requisite information for further consideration.
 - I. PP needs to refurbish the R & R plan for village within the lease area. Specifically the details of percentage of money going to spend for compensation of villagers.

- II. PP requires to submit the water budget and alternative plans for reducing water usage.
 - III. PP needs to carry out vehicular emission impact analysis for with and without installation of conveyor belt and explain the impact on environmental quality.
 - IV. PP needs to submit details of technology being deployed for blasting/rock breaking.
 - V. PP needs to submit copy of CGWA approval since inception of mining and compliance report of the CGWA conditions mentioned therein.
 - VI. PP needs to submit details of environment management cell and their educational backgrounds, role and experience.
 - VII. PP need to submit the details of laboratory and their accreditation certificate for the hydrogeological study.
 - VIII. PP needs to revise the CER budget as per the provisions of OM No. F. No. 22-65/2017-IA-III dated 01 May 2018.
 - IX. PP submitted that one seasonal Nala and Peru or Pichhra Nadi (towards Eastern part of the mine) is crossing through the lease area. PP needs to submit conceptual plans for protection of these nallah including plantation or forest development along the rivers and their budgetary provisions.
 - X. PP needs to submit updated status of court cases.
4. PP submitted the information online on 31 Dec 2019 accordingly the proposal was considered in the EAC in its meeting held on January 30-31, 2020 wherein the PP submitted the following:
- I. PP submitted the R&R as "M/s OCL has already obtained administrative approval over an area of 113.52ha under the first phase land acquisition and the District Collector, Sundergarh has recommended an area 290.21ha to the steel and Mines Department Govt. Of Odisha for administrative approval and balance area will be applied for acquisition in subsequent phase. Further PP submitted that M/s OCL will initially provide one-time 40% partial payment of total compensation in joint bank account (Name of Husband & wife), in case of widow and widower money will be transferred in single name bank account. PP also submitted that after the 40% fixed deposit of total compensation 20% amount will be fixed on the name of girl child for her education and marriage for 10 years. 20% amount will be fixed on the name of the land owner and 20% payment will be done at the of possession of land as a monthly income scheme on joint name (Wife and Husband), in case of widow and widower scheme will be done on single name".
 - II. PP submitted that the total water requirement of the project will be 509 KLD. Out of which 348 Kld for dust suppression, 50 KLD for green belt development, 41 KLD for Crusher, 12 KLD for Workshop, which will be sourced from

rainwater, mine seepage stored in mine pit and ground water from dug well/Bore well. Further, PP submitted that recycled water from ETP/STP will be used for sprinkling on haulage road for dust suppression. Groundwater will be used for drinking.

Observation of the Committee: PP reported that the total water requirement will be 509 KLD in the EIA/EMP report. Again PP vide letter no LQ:GO:EC dated 28.12.2019 submitted that the total water requirement will be 519 KLD there is ambiguity of total water requirement. After deliberation, committee restricted the water requirement to 509 KLD and asked the PP to improvise on the water uses and adopt better technology for water use along with enhance water conservation practices.

- III. PP submitted the vehicular emission impact analysis without installation of conveyor belt and the impact on environmental quality.

Observation of the Committee: PP submitted the vehicular emission impact analysis for with and without installation of conveyor belt and its impact differences and mitigation plan as sought by the EAC, thus the Committee suggested PP to ensure that the necessary EMP should be implemented and monitored properly to ensure better compliance in order to contain the vehicular emission to minimum.

- IV. PP submitted that the blasting is done by conventional explosive with the SME & ANFO and Charging pattern as recommended by CMRI to restrict the ground vibration within the safety limit. And PP also submitted that Nonel, multi-delay detonators and electric detonator will be used for reduce the sound and ground vibration within the safety limit. PP also committed that no secondary breaking and blasting will be done by hydraulic rock breaker.
- V. PP submitted the vide letter no 21-4(179)/CGWA/SER/2009-1759 dated 23.08.2010 by the Central Ground water Authority, Ministry of Water Resources, GOI inter-alia stating that the project falls under safe category as per the ground water assessment carried out by Central Ground Water Board and the total water requirement of ground water is 550m³/day, NOC is not required for ground water withdrawal.
- VI. PP submitted the composition of Environmental Management Cell and agreed with manpower is engaged for the same also suggested to recruit the Environmentalist for the expansion proposal.

- VII. PP submitted that initially the hydro geology study done by the CMFRI and later the hydrology study has under taken by the SRK consulting. PP submitted that water sample is being taken regular interval and tested at Cleenverion Lab which is NABL accredited accordingly PP submitted the copy of certificate of accreditation of National Accreditation Board for testing and Calibration laboratories in the name of Cleenveiron Private Limited the same is valid till 08.11.2021.
- VIII. PP submitted that one seasonal Nala and Peru or PichhraNadi (towards Eastern part of the mine) is crossing through the lease area and PP proposed that as a protective measurement that 150m around the nallah has been left as safety zone around the nallah and the safety zone will be planted with 57000 trees as safety zone around the nallah. PP further submitted 126 lakhs budget has been kept for plantation.
- IX. PP submitted that total cost of the project is Rs. 70 Crores, and PP proposed under the CER, Rs. 4.0 crores the same will be implemented in 1st three-year plan period on execution of mining lease deed and commencement of mining activities. Company will budget 2% of the profit each year towards CSR fund.
- X. PP submitted that there is one Court case is pending against the project. WP(c) 15143 of 2013 at Hon'ble High Court, Odisha w.r.t. stamp duty matter and for the same stay has been granted 09.07.2013 by the Hon'ble High Court of Odisha in Misc. Case No. 14205/2013 arising out of WP(c) No. 15143/2013 is in force.
5. The Committee also found that the current proposal is for expansion in production of limestone from 4.2 million TPA to 9.5 million TPA only and other production is not proposed to be increases viz. 0.08 million TPA of Dolomite, which is minor mineral thus DSR requirement as per the Ministry Notification S.O.3611(E) dated 25th July, 2018 may not be necessary at this stage. However, PP will not increase Dolomite (minor mineral) production from the permitted EC capacity.
6. Based on the presentation made by PP and the discussion held, the Committee recommended the proposal for grant of EC for **Lanjiberna Limestone and Dolomite Mine of M/s. OCL INDIA Limited with expansion in production of limestone from 4.2 million TPA to 9.5 million TPA, 0.08 million TPA of Dolomite and Rejects/Waste 7.42 Million TPA (Total Excavation: 17 MTPA) along with four existing crushers installed within mine lease area i.e. 400 TPH, 1200 TPH and 2x 200 TPH (aggregate) and installation of one new crusher of 1600 TPH in the mine lease area of 873.057 ha located at Villages-Alanda, Bihabandh, Jhagarpur, Kesramal, Raiberna, Katang, Dhauraada, Lanjiberna and**

Kukuda, Tehsil-Rajgangpur and Kutra, District Sundargarh, Odisha with standard EC condition with specific conditions mentioned below:

- I. Water requirement will be restricted to 509 KLD and PP to improvise on the water uses and adopt better technology for water use along with enhance water conservation practices.
- II. PP to ensure that the necessary EMP should be implemented and monitored properly to ensure better compliance in order to contain the vehicular emission to minimum.

2.5 Aniali Limestone mine with production capacity of 0.014 TPA(ROM) by M/S TATA CHEMICALS LIMITED located at survey no. 207/p, Village-Aniali, Taluka-Ranavav, District-Porbander, Gujarat (M.L. Area 12.27 Ha).-Amendment in EC w.r.t. Specific Condition no (ii) "Environmental clearance is subject to obtaining clearance under the wildlife (Protection) Act, 1972 from the Competent Authority as it is applicable to this project."

Proposal no.: IA/GJ/MIN/126699/2019, File no.: J-11015/304/2012-IA.II (M)

The proposal of **M/S TATA CHEMICALS LIMITED** is for amendment in EC granted vide letter no J-11015/304/2012-IA.II (M) dated 27th July, 2015 for Aniali Limestone mine with production capacity of 0.014million TPA(ROM) by M/s TATA Chemicals Ltd., located at survey no 207/p, village-Aniali, Taluka-Ranavav, District-Porbandar, Gujarat(12.27ha). PP in this application requested for amendment in EC **Specific Condition no (ii) "Environmental clearance is subject to obtaining clearance under the wildlife (Protection) Act, 1972 from the Competent Authority as it is applicable to this project."**

2. PP submitted the before the Committee the EC accorded by the Ministry vide letter no. J-11015/304/202-IA.II(M) dated 27th July, 2015 for Aniali Limestone mine with production capacity of 0.014 million TPA(ROM) by M/s Tata Chemicals Ltd., located at survey no. 207/p, village-Aniali, Taluk-Ranavav, District-Porbandar, Gujarat(12.27ha) *subject to obtaining clearance under the wildlife (Protection) Act, 1972 from the Competent Authority as it is applicable to this project.* As the project is falls at a distance of 4.14km distance from the Barda Wildlife Sanctuary from the mine lease area.
3. PP is submitted that Ministry issued the ESZ notification S.O.1365 (E) for Barda Wildlife Sanctuary and the mine lease area falls outside the boundaries of Ecosensitive Zone, and the specific condition of obtaining clearance under the Wildlife (Protection) Act, 1972 is not applicable
4. The Committee noted that the mine lease area is located at the distance of 4.14 KM from the *Eco-sensitive Zone* boundaries and the said ESZ notification

no S.O.1365 (E) dated 28th April, 2017 for Barda Wildlife Sanctuary it was mentioned as. **"Extent and Boundaries of Eco-sensitive Zone.—(1) The Eco-sensitive Zone shall be with a peripheral area of 65.58 square kilometers with an extent up to 4.76 kilometers around the boundary of Barda Wildlife Sanctuary".**

5. After detailed deliberations the Committee **recommended** the proposal of amendment subjected to submission of report from state forest department along with map clearly demarcating the distance of the mine lease area from the boundary of notified *Eco-sensitive Zone* boundaries.

2.6: Amendment in the EC granted for Guda Clay mine with enhancement of production capacity from 60,000 TPA to 2,50,000 TPA (ROM) of Clay by M/s Harish Clays, located at village-Guda, Tehsil Kolayat, District Bikaner, Rajasthan (284.20ha)

File No: J-11015/163/2014-IA. II(M); Proposal No: IA/RJ/MIN/23186/2014-Amendment in EC

The Proposal of M/s Harish Clays is for amendment in the EC Condition No 22 wherein inter-alia it has mentioned that ". The Maximum Height of the dumps shall not exceed 8 meters and width 20 meters and overall slope of the dump shall be maintained at 450..." and "...The entire excavated area shall be backfilled and afforested...".

2. The proposal was placed in Expert Appraisal Committee, in its 36th meeting, held during 28-29 September 2018 wherein the Committee deferred the proposal for want of requisite information. PP submitted the information and proposal is now placed in EAC meeting held during 30-31 January, 2020. The PP did not attend the meeting and therefore Committee **deferred** the proposal and is of the view that proposal may be place in EAC meeting after receiving request from PP and in case PP did not reply within 15 days after uploading on the minutes the proposal may be de-listed as already sufficient time was given to submit requisite information.

2.7 M/s SAGAR CEMENTS LIMESTONE MINE Limestone production of 3.3 MTPA with Total Excavation 3.398 MTPA (Cement grade LS - 3.135 MTPA + Sub Grade LS (Blendable) - 0.165 MTPA + Top Soil - 0.098 MTPA)- ToR Regading

File No. J-11015/02/2020-IA. II (M); Proposal No. IA/TG/MIN/114695/2019]

The Proposal of **M/S Sagar Cements Limestone** Mine Limestone production of 3.3 MTPA with Total Excavation 3.398 MTPA (Cement grade LS - 3.135 MTPA + Sub

Grade LS (Blendable) - 0.165 MTPA + Top Soil - 0.098 MTPA). PP submitted the previous there were two mines ML-1 (196.35 Ha; EC obtained as per provision of EIA 1994) & ML-2 (130.23 Ha, EC obtained as per provision of EIA 2006). PP submitted that both the mining lease was amalgamated into single mining lease of 326.58 Ha (196.35 Ha +130.23 Ha) in the year 2008. PP submitted that thereafter somewhere in 2012 PP approached MoEF&CC for amalgamation of both the ECs but Ministry informed that there is no provision of amalgamation of ECs. PP continued mining and after issuance of S.O. 1530(E) dated 6.4.2018 applied as per the provision of this notification on 6.09.2018 i.e. within the stipulated time period of six months. As the mining leases were amalgamated PP applied for the entire area of 326.58 Ha.

2. PP also submitted the past production details as per which spate production details is available till 2008 for both the mines and thereafter combined production details is available as the mining leases were amalgamated.
3. Based on the discussion held and documents submitted the Committee is of the view that in the instant case PP did not obtained amendment in both the ECs after amalgamation of mining leases, PP approached the Ministry in the year 2012 but no supporting documents in this regard was submitted by PP. As this is a typical case wherein one EC was granted under EIA 1994 and another EC was granted under EIA 2006 then the combined mining lease can be considered as per provision of notification 6.04.2018 or not. There is also difficulty in ascertaining the violation of S.O. 804(E) dated 14.03.2017 and Common Cause Judgment dated 2.08.2017. Committee is of the view that comments of Policy Sector may be sought for dealing with such type of cases. Committee is also of the view that PP should submit the communication made by the Ministry if any with respect to amalgamations of ECs and prove that production from both the mines is within the approved EC capacity. Committee therefore **deferred** the proposal.

2.8 Sitapuram Limestone Mines of M/S Starnet Marketing Private Limited proposed production capacity of 495285.12 TPA in the mine lease area 8.397 Ha located at Village Madurna, Tehsil- Chainpur, District- Kaimur, State- Bihar.

File No: J-11015/63/2019-IA. II (M); Proposal No. IA/BR/MIN/109225/2019

The Proposal of **M/S Starnet Marketing Private Limited** is for grant of Term of Reference for production of 495285.12 TPA of Stone from mine lease having area of 8.397 Ha located at Village Madurna, Tehsil- Chainpur, District- Kaimur, State-

Bihar. PP submitted that they have applied to the Ministry as Cat 'A' project as the general condition is applicable for the project as the Kaimur WLS is coming within 10 km of the project site.

Based on the document submitted and discussion held, the Committee observed that PP did not submit supporting document wherein the distance of mining lease from protected area is mentioned, in the absence of supporting documents the proposal does not qualify for the appraisal by EAC and therefore Committee **deferred** the proposal and ask the PP to submit

- i) Proof of distance of mining lease from protected area duly authenticated by concerned authority,
- ii) In Lol time period of 120 days was given for submission of certain documents and that has already been expired, thus PP needs to submit the revised valid Lol,
- iii) PP needs to submit the cluster certificate as per S.O. 2269 (E) dated 1.07.2016.

2.9 Sitapuram Limestone (ML-1) Mining project of M/s Zuari Cement Ltd. for proposed production capacity of 30, 00,000 TPA over an area of 770.23 Ha. The Mine lease area is located at the Villages-Dondapadu, Ramapuram and Revoor, District-Suryapet, Telangana.

[File No: J-11015/63/2003-IA.II (M); IA/TG/MIN/117756/2019]

PP did not attend the meeting. Committee therefore **deferred** the proposal.

2.10 Chorbedi 1 Limestone Mine (Area 254.89 Ha) located at Village: Chorbedi, Taluka: Lalpur, District: Jamnagar, Gujarat of M/s Shree Digvijay Cement Co. Ltd. Proposal Under the provision of Notification dated 06.04.2018

Old File No. J-11015/50/2003-IA. II) Proposal no: IA/GJ/MIN/81570/2018.
File new: IA-J-11015/161/2018-IA-II(M)

The proposal of M/s Shree Digvijay Cement Co. Ltd for proposed production capacity of 0.716 MT Limestone from the area 254.89 Ha. The mine lease area is located at Village: Chorbedi, Taluka: Lalpur, District: Jamnagar, Gujarat. The area falls in between Latitude: 22° 5'52.51"N and 22° 4'37.19"N and Longitude: 70°0'8.03"E and 69°59'47.04"E respectively. The proposal covered under survey of India toposheet no. Old -01, 405(New). The area falls under

Seismic zone-IV. The Proposal applied under the provision of Notification dated 06.04.2018 (Old File No. J-11015/50/2003-IA. II) IA/GJ/MIN/81570/2018.

2. The Member Secretary informed the Committee that PP, vide email dated 29 January, 2020 PP has requested to defer the proposal for consideration as some of the information is yet to be obtain from the State Government, which is under process. The Committee **deferred** the proposal.

2.11 Extension of validity of ToR granted vide Lr No J-11015/246/2016-IA. II (M) dated 13.04.2017 for enhancement of mines production capacity of Limestone Mine from 1.60 MTPA to 3.94 MTPA from Mining Lease Area 417.95 Ha located at Revoor & Mellacheruvu Villages, Mellacheruvu Mandal, Suryapet District, Telangana State by M/s Rain Cements Limited

File No. J-11015/246/2016-IA. II (M); Proposal No. IA/TG/MIN/128082/2019

Proposal of M/s Rain Cements Limited is for extension of validity of ToR granted vide Lr No J-11015/246/2016-IA. II (M) dated 13.04.2017 for enhancement of mines production capacity of Limestone Mine from 1.60 MTPA to 3.94 MTPA of M/s from Mining Lease Area 417.95 Ha located at Revoor & Mellacheruvu Villages, Mellacheruvu Mandal, Suryapet District, Telangana by one more year i.e. up to 13.04.2021. PP applied under Form-5 for extension of validity of ToR vide proposal No IA/TG/MIN/128082/2019 dated 30.11.2019.

2. Proposal is now placed in EAC meeting held during 30-31 January, 2020 wherein the Committee observed that extension of ToR do not require appraisal by EAC if the PP applied within the ToR validity period, but in the instant case as there was issue related to change in coordinates of the mining lease. ToR which is now being granted to other mining project are referred to EAC for any change in proposal attributes.
3. The Committee **recommended** the proposal for extension of validity of ToR for one more year i.e. 13.04.2021 for the preparation of EIA/EMP Report. In addition to earlier prescribed ToR the Committee also prescribed the following additional ToR for this project for which PP agreed.
 - 1). PP should submit an undertaking by way of affidavit as required as per Ministry's O.M No 3-50/2017 -IA. II(M) 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.

- 2). PP should provide in the EIA Report details of all the statutory clearances, permissions, No. objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after grant of EC. PP shall apply EC along with compliance status of existing EC conditions.
- 3). PP should submit the revenue plan for mining lease, revenue plan should be superimposed on the satellite imagery clearly demarcate the Govt. land, private land, agricultural land etc.
- 4). PP should submit the detailed plan in tabular format (year-wise for life of mine) for afforestation and green belt development in and around the mining lease. The PP should submit the number of saplings to be planted, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. In addition to this PP should show on a surface plan (5-year interval for life of mine) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years. The capital and recurring expenditure to be incurred needs to be submitted. Presently in India there are many agencies which are developing forest in short interval of time. Thus, for the plantation activities details of the experts/agencies to be engaged needs to be provided with budgetary provisions.
- 5). PP should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. PP should submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.
- 6). PP should clearly bring out the details of the manpower to be engaged for this project with their roles /responsibilities/designations. In addition to this PP should mention the number and designation of person to be engaged for implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.
- 7). PP should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance & Corporate Environmental Responsibility. The capital and recurring expenditure to be incurred needs to be submitted.
- 8). PP should submit the measures/technology to be adopted for prevention of illegal mining and pilferage of mineral. PP should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.

- 9). PP should clearly show the transport route of the mineral and protection and mitigative measure to be adopted while transportation of the mineral. The impact from the center line of the road on either side should be clearly brought out supported with the line source modelling and isopleth. Further, frequency of testing of Poly Achromatic Hydrocarbon needs to be submitted along with budget. Based on the above study the compensation to be paid in the event of damage to the crop and land on the either side of the road needs to be mentioned. The PP should provide the source of equations used and complete calculations for computing the emission rate from the various sources.
- 10). PP should clearly bring out that what is the specific diesel consumption (liters/tonne for total excavation) and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
- 11). PP should bring out the awareness campaign to be carried out on various environmental issues, practical training facility to be provided to the environmental engineer/diploma holders, mining engineer/diploma holders, geologists, and other trades related to mining operations. Target for the same needs to be submitted.
- 12). The budget to be earmarked for the various activities shall be decided after perusal of the Standard EC Conditions published by the Ministry. After perusal of Standard EC conditions if agreed PP should also submit an undertaking by the way of affidavit for Compliance of Standard EC conditions already prescribed by the Ministry vide O.M. No and Specific condition if prescribed by the EAC/MoEF&CC.
- 13). The PP should ensure that only NABET accredited consultant shall be engaged for the preparation of EIA/EMP Reports. PP shall ensure that accreditation of consultant shall be valid during the collection of baseline data, preparation of EIA/EMP report and during the appraisal process. The PP and consultant should submit an undertaking the information and data provided in the EIA Report and submitted to the Ministry are factually correct and PP and consultant are fully accountable for the same.
- 14). The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.
- 15). All the certificates viz. Involvement of Forest land, distance from protected area, list of flora & fauna should be duly authenticated by Chief Wildlife Warden & Forest Department. The Certificate should bear the name, designation, official seal of the person signing the certificate and letter number. The EIA/EMP report should cover the cumulative impacts of own cement plant, other cement plant and mines in the study area.

- 16). PP should submit the District Survey Report as per S.O. 3611(E) dated 25.07.2018 if applicable for this project.

2.12 Mudhvay Limestone Mine Block 'C' by M/s Adani Cementation Ltd. located at Village: Mudhvay, Taluka: Lakhpat, District: Kutch, Gujarat with Maximum Production Capacity 12 million TPA Mining Lease Area: 251.9 Ha.

File no: J-11015/121/2017-IA.II(M) Proposal no: IA/GJ/MIN/70787/2017.

The proposal of M/s Adani Cementation Ltd is for mining of 12.0 MTPA of limestone from Mudhvay Limestone Mine Block 'C' from the mine lease area of 251.9 ha, the mine lease area is located at Govt land Survey No. '26P' Private Santhani Land Survey No. 26P7, 26P10, 26P22, 26P18, 26P41, 26P49, 26P33, 26P11, 26P42, 26P30, 26P57, 26P32, 26P25, 26P8, 26P52, 26P37, 26P9, 26P19, 26P27, 26P63, 26P47, 26P12, 8P1, 8P2, 8p9, 183, 26P10, 27P10, of Village: Mudhvay, Taluka: Lakhpat, District: Kutch, Gujarat. The latitudes and longitudes of the Mine lease fall between Latitude: 23°42'43.6432" N to 23°43'59.9313" N and Longitude: - E 68°41'51.6687" E to 68°42'40.9420" E.

2. As per EIA Notification dated 14th September, 2006 as amended from time to time, the project falls under Category "A", Project or Activity 1(a).
3. The PP applied online for grant of ToR on 12.11.2017 and submitted the Form-1, Pre-feasibility Report, and copy of Letter of Intent. The proposal was appraised in the EAC in its meeting held on 21-22 December, 2017 wherein the Committee recommended the TOR. Ministry granted the TOR vide letter no. J-11015/121/2017-IA.II(M) dated 9th January, 2018 for Preparation of Environmental Impact Assessment (EIA) Report and Environmental Management Plan (EMP).
4. PP submitted the EIA/EMP Report to Ministry for seeking environmental clearance and the proposal was considered in the EAC in its meeting held on January 30-31, 2020 wherein PP submitted the following:
5. The total mine lease area is 251.90 ha, comprises of 132.42ha (52.57%) of agricultural land and 119.48ha (47.43%) of open scrub land. The proponent submitted that the Letter of Intent (LOI) has been issued for winning mineral Limestone (cement grade) over an area of 251.90 ha by Department of Industries & Mines, Govt. of Gujarat vide letter no. MCR- 102016- 2146-CHH dated 21.06.2017 for a period of 50 years from the date of mining lease execution.

6. PP reported that the Mining Plan Progressive Mine Closure Plan is approved by the Regional Controller of Mines, Indian Bureau of Mines, Gandhinagar vide letter no. पत्र से. 684(4)(1)/MP-84 dated 03.01.2018 as per the approved mine plan the mining shall be carried out by fully mechanized opencast method using continuous surface miner (CSM) with combination of pay loader and dumpers/tippers. No drilling and blasting is required. The cutting depth of surface miner is 250-300mm and product size generated after cutting and milling in the range of 75-150mm. This size of limestone is suitable for cement plant without crushing. PP submitted that the working Bench height will be 6m and 15m width will be maintained respectively. The ultimate pit slope will be 45⁰ and slope of over burden will be maintained at 70⁰. Overburden waste is loose material thus, not required drilling and blasting. It can directly be mined with the help of excavator bucket and will be loaded in dumper/tippers. Overburden material will be stored at designated place as per approved mining plan inside the mine lease area. Surface miner is environment friendly machine and to be used in order to avoid blasting. No crushing of mineral limestone is required. PP also reported that 0.3m cover of overburden sandy soil is available, the same during the mine plan OB will be dumped at designated place a and will be re-handled and backfilling will be started in eighth year onwards, after getting part of worked out area matured for the same. The future Waste handling will vary based on the exploration plan of the Mining lease area and accordingly backfilling will be planned. It has been envisaged that after back-filling the entire excavated area of 112.30 Ha will have a void of about 30.0 m BG at the end of the conceptual period. The loading of excavated material by surface miner, is to be carried out by pay loader and transportation carried by dumper/tippers of 35 tonne capacity. The dumpers/tippers will carry material to transfer hopper of surface Belt conveyor. The Belt conveyor to be installed within the boundary barrier of boundary pillars C-07 to C-01. Limestone shall be conveyed to proposed cement plant along boundary barrier by surface Belt conveyor.
7. PP submitted that the Plantation will be carried out along statutory barrier as a green belt. The plantation will be done at the rate of 1000 saplings per Ha @ 1.0 Ha per year. The top soil removed during the mining process will be used for plantation purpose. At the end of mine life, about 83.50 Ha of lease area will be under plantation, out of which 5.00 Ha will be boundary greenbelt and 78.50 Ha will be plantation on reclaimed areas. The afforested area will be protected from cattle by fencing off the plantation area.
8. The PP reported that the Gujarat State Pollution Control Board conducted Public Hearing for the proposed project of Cement Plant of Production Capacity 10MTPA

Clinker, 10MTPA Cement & 99 MW Cpp (Including 24MW WHRS); Limestone Mine for 12MTPA from 251.9ha Area and Berthing Jetty of 19MTPA Capacity, located Village: Maldo, Mudhvay, Koriyani & Kapurasi, Taluka: Lakhpat, District: Kutch, Gujarat State on 28.05.2019 at Village Koriyani, Taluka Lakhpat, District Kutch (Gujarat). The advertisement for public hearing was published in "Kutch mitra" and "The Indian Express" on 22.04.2019. The Public hearing was conducted under the chairmanship of Smt. Remya Mohan (I.A.S.), District Magistrate and District Collector Bhuj, Kutch and Dr. S.N Agravat, I/c Regional Officer, Gujarat Pollution Control Board, Regional office Kutch-west was also presented. The issues raised during public hearing were also deliberated during the meeting which includes, employment, drinking water facility, medical facility, skill development, infrastructure facility in school & village, implementation of pollution control measures, additional compensation, educational facilities, effect on agricultural crop production, road maintenance, employment to local people, etc. The PP inter-alia committed during public hearing that the project will employ around 630 persons per day during construction Phase and Preference will be given to local workers from the surrounding villages. During the operation phase, there will be direct around 150 persons and Indirectly more than 450 persons likely to give employment.

9. Baseline data was generated during winter season December 2017 to February 2018 for various environmental parameters including air, water (surface and ground water), land and soil, ecology and socio-economic status to determine quality of the prevailing environmental settings. The noise level fluctuations in daytime and night time was observed and the maximum noise level in daytime observed was 50.4dB(A) at NQ6, S.K.Varmanagar and minimum noise level observed was 41.4 dB(A) at NQ3, Koriyani Village, the Leq value is slightly exceeding the prescribed limit of CPCB. The maximum noise level in night time observed was 42.9dB(A) at NQ6, S.K.Varmanagar and minimum noise level was 32.7 dB(A) at NQ8, Mudhvay. Particulate Matter (PM10) Maximum concentration was recorded in AAQ6, S.K Varmanagar (75.1µg/m³) and the minimum concentration was recorded in AAQ1-Onsite Mining Area (64.7µg/m³). The higher concentration of PM10 in AAQ6-SK Varmanagar due to attributed to its proximity to State Highway and the ongoing, construction activities in the vicinity and presence of commercial activities. As per the monitoring data, PM2.5 ranges between 23.3µg/m³ in AAQ1(Onsite ML Area) to 32.9µg/m³ in AAQ6 (S.K.Varmanagar). Further PP reported that the Surface and ground water sampling was carried out in 6 and 7 locations respectively. The analysis results indicate that the pH values of all the samples of Kori Creek are in the range of 7.9 (SW5, Kori Creek 3) to 8.1 (SW4 & SW6, Kori Creek2 & Kori Creek4) indicating alkaline characteristics. All values meet

criteria A as per CPCB surface water quality standard. TDS was observed in the range of 39,747 mg/l at SW6 (Kori Creek 4) to 43,200.0 mg/l at SW3 (Kori Creek 1).

10. The total water requirement for the mining will be 250 KLD which will be sourced from desalination plant to be proposed in upcoming cement plant in the vicinity.
11. The total cost of the project shall be Rs. 7525/- Crore (Approx.) and the proposed project about 630 persons is will be recruit during construction phase, preference will be given to local workers. During the operation phase, 150 skilled workers will be directly and 450 persons indirectly will be recruit.
12. Based on the presentation made by PP and the discussion held, the Committee **deferred** the proposal for want of following requisite information for further consideration.
 - I. Detailed hydrogeological survey to be conducted in view of salinity ingress, if any in the mining process up to the conceptual pit limit. The aquifer characteristics shall be delineated with geophysical survey to assess impact on the ground water regime and mitigation measures.
 - II. Stage wise reclamation plan of the mine up to the period of conceptual pit limit shall be provided in the environment management plan.
 - III. The schedule of the occupational health survey shall be furnished in the Environmental management plant as per the ILO and DGMS rules.
 - IV. Slope stability criteria of the bench surfaces shall be furnished in the EIA report highlighting that the mined out benches shall be stabilised after completion of the mining without further land degradation as the strata is not hard. Stage wise plan including dump stabilisation also shall be furnished.
 - V. As the area is in close proximity to Narayan Sarover Wild life sanctuary, a study to assess the impact of mining activity on bird's Migratory path shall be conducted and mitigation plan for the same shall be incorporated in consultation with State Govt and the revised conservation plan to be submitted.
 - VI. Fodder development plan for the livestock to mitigate the impact on grazing land due to mining activity for the village of the vicinity shall be brought out in the socio economic development plan.
 - VII. Certificate from the state forest department stating that no forest land involved in the mining lease area.
 - VIII. Water budget and details on water conservation plan to reduce the water requirement for mine shall be submitted.
 - IX. PP to submit revised CER based on the project cost of mine, with action plan incorporating the budget & R&R Plan for project affected families.

X. Public hearing concerns related to mining activity to be identified and addressed properly with budget allocation.

2.13 Expansion of “Dhani Abdulla Wali Gypsum Mine” with enhancement of production capacity from 5.0 Lakhs TPA to 6.0 Lakhs TPA (ROM) of Gypsum by M/s Rajasthan State Mines & Minerals Limited, located near village Dhani Abdulla Wali, Tehsil -Kolayat, District Bikaner, Rajasthan (MLA 1278 ha) (F.No. J-11015/63/2014- IA.II(M); Proposal No. IA/RJ/MIN/62699/2014) (Consultant: M/s Mantec Consultants Pvt. Ltd.) Consideration of Environmental Clearance

1. The Proposal of M/s Rajasthan State Mines & Minerals Limited is for Expansion of “Dhani Abdulla Wali Gypsum Mine” with enhancement of production capacity from 5.0 Lakhs TPA to 6.0 Lakhs TPA (ROM) of Gypsum. The mine is located near village Dhani Abdulla Wali, Tehsil -Kolayat, District Bikaner, Rajasthan in the MLA of 1278 ha. The latitudes and longitudes of the site are 28°20’3.25” N to 28°21’39.2” N and 72°22’52.97” E to 72°25’34.97” E respectively and falls within the Survey of India Topo-sheet No. 44D/7.
2. The proposal for ToR was earlier considered by the EAC in its meeting held during 20-21, March 2014 wherein the Committee recommended the ToR. The Ministry has issued ToR vide letter no. J-11015/63/2014-IA. II (M), dated 07.05.2014. PP has submitted the EIA/EMP Report online to the Ministry for seeking Environmental Clearance after conducting Public Hearing.
3. The proposal for EC was considered in EAC meeting held on 22nd March 2018 & 24th August 2018 wherein the Committee deferred the proposal for want of requisite information. PP submitted the information and the proposal is now placed in EAC meeting held during 30-31 January, 2020 wherein the Committee based on the discussion held and document submitted **deferred** the proposal and ask the PP to submit i) supporting documents regarding claim of PP for compliance of earlier EC Conditions, ii) Accreditation certificate of the lab from where samples were analyzed, and iii) Project cost and calculation of CER amount.

2.14 Bolani Iron Ore Mine along with Beneficiation and Pellet Plant of M/s Steel Authority of India Limited Within the Existing Mine Lease Area (5.1 Square Mile Mining Lease) located at village Bolani, Tehsil Barbil, District Keonjhar, Odisha

File no.: J-11015/418/2008-IA. II (M), Proposal no: IA/OR/MIN/133680/2019

PP did not attend the meeting. The Committee **deferred** the proposal.

2.15 Amendment in Environmental Clearance granted vide Letter No J11015/372/2012-IA. II (M) dated 26.05.2016 Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in River Ganga with proposed production capacity of 238977.2 m³ /annum (ROM) by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village(s)- Villages- Bhogpur, Tatwala and Ramkundi, District-Haridwar, Uttarakhand (ML Area 190.57 Ha).

**File no - J-11015/372/2012-IA. II (M), Proposal no. IA/UK/ MIN/42006/2012
—for EC Amendment**

The Ministry initially granted Environmental Clearance vide Letter No **J-11015/372/2012- IA. II (M) dated 26.05.2016** for Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in River Ganga with proposed production capacity of **238977.2 m³/annum** by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village(s)- Villages- **Bhogpur**, Tatwala and Ramkundi, District-Haridwar, Uttarakhand (ML Area 190.57 Ha).

2. Ministry based on the complaint received and site inspection carried out by Regional Office, MoEF&CC had issued Show Cause Notice for the aforementioned mining project of UKFDC vides LR No Z-11015/72/2015-IA. (II) Dated 18.07.2017. In reply to the Show Cause Notice the UKFDC vide Lr. No 2475 dated 1.08.2017 & 2664 dated 09.08.2017 has submitted that the work of conducting Replenishment Study has already been awarded to Indian Institute of Water & Soil Conservation (IIWSC), Dehradun and report of the same could be submitted after the rainy season. The UKFDC vide letter No 4461 dated 12.11.2017 submitted the Replenishment Study Report 2017-18 for the aforementioned mining project.
3. The Ministry placed the replenishment study report before the Expert Appraisal Committee in its meeting held on 18-19 January, 2018, wherein the Committee suggested the Ministry to constitute a committee for the site visit for ground truthing. The Ministry vide letter no J-11015/72/2015 IA. II(M) dated 22.01.2018 constitute a committee for the site visit of the aforementioned mining project. The Committee visited the site on 1st -3rd February, 2018 and placed its report before

the EAC in its meeting held on 23-24 March, 2018, wherein, the Committee recommended that the capacity of the earlier EC shall be reduced as proposed in the replenishment study report submitted by IIWSC. But the quantity of safe extractable material should be considered as 30% instead of 90% as mentioned in the replenishment study report. Further, in place of Boulder, Bajri & Sand Mining the term River Bed Material (RBM) should be used in Environmental Clearances granted to UKFDC.

4. The matter was then examined in the Ministry and the EC granted vide letter No. J-11015/372/2012- IA. II (M) dated 26.05.2016 was amended vide LR No **J-11015/372/2012- IA. II (M) dated 16.05.2018** w.r.t. production capacity which was reduced **from 238977.2 m3/annum to 28273.59 m3/annum** and name of the mineral which is replaced from Sand, Bajri and Boulder (Minor Mineral) to River Bed Material (RBM).
5. PP then vide proposal No. IA/UK/MIN/42006/2012 dated 26.12.2018 applied for amendment in EC and the proposal was placed in EAC meeting held during 22-23 January, 2019 during the meeting Dr. Parmanand Kumar, Scientist- C, FRI, Dehradun presented the replenishment study report prepared by the FRI. The Committee asked the FRI to conclude the report and clearly specify whether the amount of RBM mentioned in the report can be safely extractable or not. The Committee finally deferred the proposal and is of the view that proposal can only be considered after the National Mission for Clean Ganga will take a decision on the Show Cause Notice issued on 09.10.2018 under section 5 of EPA, 1986 by exercise of power vested to NMCG under para 8 of the Authorities Order, 2016 and on submission of clarification sought above by Forest Research Institute.
6. The PP replied to the ADS raised by EAC on 31.12.2019 and the proposal is now placed in EAC meeting held during 30-31 January, 2020. During the meeting Dr. Parmanand Kumar, Scientist- C, FRI, Dehradun presented the replenishment study report prepared by the FRI. The Committee observed that amount of RBM deposited (**in Bhogpur**) as per replenishment study report 2018 is **1369605.39 m3** and as per 2019 replenishment study report is **573911.1 m3**. Dr. Parmanand Kumar, Scientist- C, FRI, Dehradun who was involved in the preparation of report confirmed that as there was no mining so the net amount deposited (difference between pre-monsoon 2018 survey and 2019 post monsoon survey) comes out to be **1943516.49 m3** which safe extractable. The PP also submitted that there is no ban on mining in this region by Hon'ble NGT. PP informed that CPCB and NMCG has issued direction u/s of E(P) A, 1986 for not carrying out mining activity in certain area. It was further informed that CPCB has withdrawn their direction

vide letter no. CPCB/IPC-II/Direction-DM/SSP, Haridwar/2016 dt. 22.03.2019. The reply submitted by PP with NMCG is under consideration.

7. The Committee is of the view that total RBM deposited is more than the initial amount granted i.e. 238977.2 m³/annum. Therefore, the committee **recommended amendment in EC** granted vides LR No J-11015/372/2012- IA. II (M) dated 16.05.2018 w.r.t. production capacity from 28273.59 m³/annum to 238977.2 m³/annum. The Committee also observed that specific condition as per previous amendment shall be applicable in the instant case. The committee recommended the following additional condition.

“The mining shall be limited to the area which is not covered under the direction of NMCG issued vide letter dated 9.10.2018. Mining in such area will be subjected to the final decision of NMCG”.

2.16 Amendment in Environmental Clearance granted vide Letter No J11015/371/2012-IA. II (M) dated 15.03.2016 Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in River Ganga (in Bishanpur) with proposed production capacity of 207363.22 m³/annum by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village(s)- Bishanpur, Tehsil- Haridwar, District-Haridwar, Uttarakhand (MLA: 237.918 ha).

File no - J-11015/371/2012-IA. II(M), Proposal no. IA/UK/MIN/32097/2013— for EC Amendment

The Ministry initially granted Environmental Clearance vide Letter No **J-11015/371/2012- IA. II (M) dated 15.03.2016** for Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in River Ganga (**in Bishanpur**) with proposed production capacity of **207963.22 m³/annum** by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village(s)- Bishanpur, Tehsil-Haridwar, District-Haridwar, Uttarakhand (**MLA: 237.918 ha**).

2. Ministry based on the complaint received and site inspection carried out by Regional Office, MoEF&CC had issued Show Cause Notice for the aforementioned mining project of UKFDC vides LR No Z-11015/72/2015-IA. (II) Dated 18.07.2017. In reply to the Show Cause Notice the UKFDC vide Lr. No 2475 dated 1.08.2017 & 2664 dated 09.08.2017 has submitted that the work of conducting Replenishment Study has already been awarded to Indian Institute of Water & Soil Conservation (IIWSC), Dehradun and report of the same could be submitted after the rainy

season. The UKFDC vide letter No 4461 dated 12.11.2017 submitted the Replenishment Study Report 2017-18 for the aforementioned mining project.

3. The Ministry placed the replenishment study report before the Expert Appraisal Committee in its meeting held on 18-19 January, 2018, wherein the Committee suggested the Ministry to constitute a committee for the site visit for ground truthing. The Ministry vide letter no J-11015/72/2015 IA. II(M) dated 22.01.2018 constitute a committee for the site visit of the aforementioned mining project. The Committee visited the site on 1st -3rd February, 2018 and placed its report before the EAC in its meeting held on 23-24 March, 2018, wherein, the Committee recommended that the capacity of the earlier EC shall be reduced as proposed in the replenishment study report submitted by IIWSC. But the quantity of safe extractable material should be considered as 30% instead of 90% as mentioned in the replenishment study report. Further, in place of Boulder, Bajri & Sand Mining the term River Bed Material (RBM) should be used in Environmental Clearances granted to UKFDC.
4. The matter was then examined in the Ministry and the EC granted vide letter No. J11015/371/2012-IA. II (M) dated 15.03.2016 was amended vide LR No **J-11015/371/2012- IA. II (M) dated 16.05.2018** w.r.t. production capacity which was reduced **from 207963.22 m³/annum to 33070.43 m³/annum** and name of the mineral which is replaced from Sand, Bajri and Boulder (Minor Mineral) to River Bed Material (RBM).
5. PP then vide proposal No. IA/UK/MIN/32097/2013 dated 26.12.2018 applied for amendment in EC and the proposal was placed in EAC meeting held during 22-23 January, 2019 during the meeting Dr. Parmanand Kumar, Scientist- C, FRI, Dehradun presented the replenishment study report prepared by the FRI. The Committee asked the FRI to conclude the report and clearly specify whether the amount of RBM mentioned in the report can be safely extractable or not. The Committee finally deferred the proposal and is of the view that proposal can only be considered after the National Mission for Clean Ganga will take a decision on the Show Cause Notice issued on 09.10.2018 under section 5 of EPA, 1986 by exercise of power vested to NMCG under para 8 of the Authorities Order, 2016 and on submission of clarification sought above by Forest Research Institute.
6. The PP replied to the ADS raised by EAC on 31.12.2019 and the proposal is now placed in EAC meeting held during 30-31 January, 2020. The Committee observed that amount of RBM deposited (**in Bishanpur**) as per replenishment study report 2018 is **1946083.85 m³** and as per 2019 replenishment study report is **173933.75**

m3. Dr. Parmanand Kumar, Scientist- C, FRI, Dehradun who was involved in the preparation of report confirmed that as there was no mining so the net amount deposited (difference between pre-monsoon 2018 survey and 2019 post monsoon survey) comes out to be **2120017.60** m3 which safe extractable. The PP also submitted that there is no ban on mining in this region by Hon'ble NGT. PP informed that CPCB and NMCG has issued direction u/s of E(P) A, 1986 for not carrying out mining activity in certain area. It was further informed that CPCB has withdrawn their direction vide letter no. CPCB/IPC-II/Direction-DM/SSP, Haridwar/2016 dt. 22.03.2019. The reply submitted by PP with NMCG is under consideration.

7. The Committee is of the view that total RBM deposited is more than the initial amount granted i.e. **207963.22** m3/annum. Therefore, the committee **recommended amendment in EC** granted vides LR No J-11015/371/2012- IA. II (M) dated 16.05.2018 w.r.t. production capacity **from 33070.43 m3/annum to 207963.22 m3/annum**. The Committee also observed that specific condition as per previous amendment shall be applicable in the instant case. The committee recommended the following additional condition.

“The mining shall be limited to the area which is not covered under the direction of NMCG issued vide letter dated 9.10.2018. Mining in such area will be subjected to the final decision of NMCG”.

2.17 Amendment in Environmental Clearance granted vide Letter No J11015/369/2012-IA. II (M) dated 15.03.2016 Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in River Ganga (in Chidiyapur) with proposed production capacity of 167829.15 m3/annum by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village(s)- Chidiyapur, Tehsil- Haridwar, District-Haridwar, Uttarakhand (MLA: 325.74 ha).

File no - J-11015/369/2012-IA. II(M), Proposal no. IA/UK/MIN/32102/2013—for EC Amendment

The Ministry initially granted Environmental Clearance vide Letter No **J-11015/369/2012- IA. II (M) dated 15.03.2016** for Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in River Ganga (**in Chidiyapur**) with proposed production capacity of **167829.15 m3/annum** by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village(s)- Chidiyapur, Tehsil-Haridwar, District-Haridwar, Uttarakhand (**MLA: 325.74 ha**).

2. Ministry based on the complaint received and site inspection carried out by Regional Office, MoEF&CC had issued Show Cause Notice for the aforementioned mining project of UKFDC vide LR No Z-11015/72/2015-IA. (II) Dated 18.07.2017. In reply to the Show Cause Notice the UKFDC vide Lr. No 2475 dated 1.08.2017 & 2664 dated 09.08.2017 has submitted that the work of conducting Replenishment Study has already been awarded to Indian Institute of Water & Soil Conservation (IIWSC), Dehradun and report of the same could be submitted after the rainy season. The UKFDC vide letter No 4461 dated 12.11.2017 submitted the Replenishment Study Report 2017-18 for the aforementioned mining project.
3. The Ministry placed the replenishment study report before the Expert Appraisal Committee in its meeting held on 18-19 January, 2018, wherein the Committee suggested the Ministry to constitute a committee for the site visit for ground truthing. The Ministry vide letter no J-11015/72/2015 IA. II(M) dated 22.01.2018 constitute a committee for the site visit of the aforementioned mining project. The Committee visited the site on 1st -3rd February, 2018 and placed its report before the EAC in its meeting held on 23-24 March, 2018, wherein, the Committee recommended that the capacity of the earlier EC shall be reduced as proposed in the replenishment study report submitted by IIWSC. But the quantity of safe extractable material should be considered as 30% instead of 90% as mentioned in the replenishment study report. Further, in place of Boulder, Bajri & Sand Mining the term River Bed Material (RBM) should be used in Environmental Clearances granted to UKFDC.
4. The matter was then examined in the Ministry and the EC granted vide letter No. J11015/369/2012-IA. II (M) dated 15.03.2016 was amended vide LR No **J-11015/369/2012- IA. II (M) dated 16.05.2018** w.r.t. production capacity which was reduced **from 167829.15 m³/annum to 54090.46 m³/annum** and name of the mineral which is replaced from Sand, Bajri and Boulder (Minor Mineral) to River Bed Material (RBM).
5. PP then vide proposal No. IA/UK/MIN/32102/2013 dated 26.12.2018 applied for amendment in EC and the proposal was placed in EAC meeting held during 22-23 January, 2019 during the meeting Dr. Parmanand Kumar, Scientist- C, FRI, Dehradun presented the replenishment study report prepared by the FRI. The Committee asked the FRI to conclude the report and clearly specify whether the amount of RBM mentioned in the report can be safely extractable or not. The Committee finally deferred the proposal and is of the view that proposal can only be considered after the National Mission for Clean Ganga will take a decision on the Show Cause Notice issued on 09.10.2018 under section 5 of EPA, 1986 by

exercise of power vested to NMCG under para 8 of the Authorities Order, 2016 and on submission of clarification sought above by Forest Research Institute.

6. The PP replied to the ADS raised by EAC on 31.12.2019 and the proposal is now placed in EAC meeting held during 30-31 January, 2020. The Committee observed that amount of RBM deposited (**in Chidiyapur**) as per replenishment study report 2018 is **471289.7 m3** and as per 2019 replenishment study report is **332471.39 m3**. Dr. Parmanand Kumar, Scientist- C, FRI, Dehradun who was involved in the preparation of report confirmed that as there was no mining so the net amount deposited (difference between pre-monsoon 2018 survey and 2019 post monsoon survey) comes out to be **803761.09 m3**. PP also submitted that there is no ban on mining in this region by Hon'ble NGT. PP informed that CPCB and NMCG has issued direction u/s of E(P) A, 1986 for not carrying out mining activity in certain area. It was further informed that CPCB has withdrawn their direction vide letter no. CPCB/IPC-II/Direction-DM/SSP, Haridwar/2016 dt. 22.03.2019. The reply submitted by PP with NMCG is under consideration.
7. The Committee is of the view that total RBM deposited is more than the initial amount granted i.e. **167829.15 m3/annum**. Therefore, the committee **recommended amendment in EC** granted vides LR No J-11015/369/2012- IA. II (M) dated 16.05.2018 w.r.t. production capacity from **54090.46 m3/annum** to **167829.15 m3/annum**. The Committee also observed that specific condition as per previous amendment shall be applicable in the instant case. The committee recommended the following additional condition.

"The mining shall be limited to the area which is not covered under the direction of NMCG issued vide letter dated 9.10.2018. Mining in such area will be subjected to the final decision of NMCG".

2.18 Amendment in Environmental Clearance granted vide Letter No J11015/368/2012-IA. II (M) dated 15.03.2016 Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in River Ganga (in Shyampur) with proposed production capacity of 308331.42 m3/annum by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village(s)- Shyampur, Tehsil- Haridwar, District-Haridwar, Uttarakhand (MLA: 219.442 ha).

File no - J-11015/368/2012-IA. II(M), Proposal no. IA/UK/MIN/32103/2013—for EC Amendment

The Ministry initially granted Environmental Clearance vide Letter No **J-11015/368/2012- IA. II (M) dated 15.03.2016** for Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in River Ganga (**in Shyampur**) with proposed production capacity of **308331.42**m³/annum by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village(s)- Shyampur, Tehsil-Haridwar, District-Haridwar, Uttarakhand (**MLA: 219.442 ha**).

2. Ministry based on the complaint received and site inspection carried out by Regional Office, MoEF&CC had issued Show Cause Notice for the aforementioned mining project of UKFDC vides LR No Z-11015/72/2015-IA. (II) Dated 18.07.2017. In reply to the Show Cause Notice the UKFDC vide Lr. No 2475 dated 1.08.2017 & 2664 dated 09.08.2017 has submitted that the work of conducting Replenishment Study has already been awarded to Indian Institute of Water & Soil Conservation (IIWSC), Dehradun and report of the same could be submitted after the rainy season. The UKFDC vide letter No 4461 dated 12.11.2017 submitted the Replenishment Study Report 2017-18 for the aforementioned mining project.
3. The Ministry placed the replenishment study report before the Expert Appraisal Committee in its meeting held on 18-19 January, 2018, wherein the Committee suggested the Ministry to constitute a committee for the site visit for ground truthing. The Ministry vide letter no J-11015/72/2015 IA. II(M) dated 22.01.2018 constitute a committee for the site visit of the aforementioned mining project. The Committee visited the site on 1st -3rd February, 2018 and placed its report before the EAC in its meeting held on 23-24 March, 2018, wherein, the Committee recommended that the capacity of the earlier EC shall be reduced as proposed in the replenishment study report submitted by IIWSC. But the quantity of safe extractable material should be considered as 30% instead of 90% as mentioned in the replenishment study report. Further, in place of Boulder, Bajri & Sand Mining the term River Bed Material (RBM) should be used in Environmental Clearances granted to UKFDC.
4. The matter was then examined in the Ministry and the EC granted vide letter No. J11015/368/2012-IA. II (M) dated 15.03.2016 was amended vide LR No **J-11015/368/2012- IA. II (M) dated 16.05.2018** w.r.t. production capacity which was reduced from **308331.42** m³/annum to **62467.36** m³/annum and name of the mineral which is replaced from Sand, Bajri and Boulder (Minor Mineral) to River Bed Material (RBM).
5. PP then vide proposal No. IA/UK/MIN/32103/2013 dated 26.12.2018 applied for amendment in EC and the proposal was placed in EAC meeting held during 22-23

January, 2019 during the meeting Dr. Parmanand Kumar, Scientist- C, FRI, Dehradun presented the replenishment study report prepared by the FRI. The Committee asked the FRI to conclude the report and clearly specify whether the amount of RBM mentioned in the report can be safely extractable or not. The Committee finally deferred the proposal and is of the view that proposal can only be considered after the National Mission for Clean Ganga will take a decision on the Show Cause Notice issued on 09.10.2018 under section 5 of EPA, 1986 by exercise of power vested to NMCG under para 8 of the Authorities Order, 2016 and on submission of clarification sought above by Forest Research Institute.

6. The PP replied to the ADS raised by EAC on 31.12.2019 and the proposal is now placed in EAC meeting held during 30-31 January, 2020. The Committee observed that amount of RBM deposited (**in Shyampur**) as per replenishment study report 2018 is **1150587.16 m3** and as per 2019 replenishment study report is **167144.35 m3**. Dr. Parmanand Kumar, Scientist- C, FRI, Dehradun who was involved in the preparation of report confirmed that as there was no mining so the net amount deposited (difference between pre-monsoon 2018 survey and 2019 post monsoon survey) comes out to be **1317731.51 m3** which is safe extractable. The PP also submitted that there is no ban on mining in this region by Hon'ble NGT. PP informed that CPCB and NMCG has issued direction u/s of E(P) A, 1986 for not carrying out mining activity in certain area. It was further informed that CPCB has withdrawn their direction vide letter no. CPCB/IPC-II/Direction-DM/SSP, Haridwar/2016 dt. 22.03.2019. The reply submitted by PP with NMCG is under consideration.
7. The Committee is of the view that total RBM deposited is more than the initial amount granted i.e. **308331.42 m3/annum**. Therefore, the committee **recommended amendment in EC** granted vides LR No J-11015/368/2012- IA. II (M) dated 16.05.2018 w.r.t. production capacity from **62467.36 m3/annum** to **308331.42 m3/annum**. The Committee also observed that specific condition as per previous amendment shall be applicable in the instant case. The committee recommended the following additional condition.

"The mining shall be limited to the area which is not covered under the direction of NMCG issued vide letter dated 9.10.2018. Mining in such area will be subjected to the final decision of NMCG".

2.19 Amendment in Environmental Clearance with increase in the mine lease area from 163.90 ha to 211.9887 ha for the Mining Project Soapstone Red Ochre

and china clay (M.L No 81/82)" at near village kakroliyaGhati, Tehsil-Kotri District Bhilwara, Rajasthan by M/s Deedwaniya & Sons. [File No. J-11015/408/2005-IA.; Proposal No. II(M) IA/RJ/MIN/75361/2005]

PP did not attend the meeting. Committee therefore **deferred** the proposal.

2.20 Sambhariya Limestone Mine with proposed production capacity of 3,70,142 TPA (ROM) of Limestone by Lessess Shri Narendra Agarwal, located at near Village – Sambhariya, Near Tehsil – Bilara, District – Jodhpur (Rajasthan) (Area- 103 ha.) [File No: J-11015/58/2016-IA. II(M); Proposal No. IA/RJ/MIN/104612/2019]

PP requested to withdraw the proposal. The Committee therefore returned **the proposal in present Form.**

2.21 Khad-Moosiang Limestone of M/s Cement International Ltd proposed production capacity of 1,49,662 TPA in the mine lease area 4.75 ha located at village Lumshnong, Tehsil- Narpuh, District Jaintia Hills, Meghalaya.

File no.: J-11015/3/2020-IA. II (M) Proposal no. IA/ML/MIN/128633/2019

The proposal of **M/s Cement International Ltd** proposed production capacity of 1,49,662 TPA from the mine lease area of 4.75 ha located at village Lumshnong, Tehsil- Narpuh, District Jaintia Hills, Meghalaya. The area falls in between Latitude- 25⁰ 09' 49.14" to 25⁰ 09' 49.38"N and Longitude- 92⁰ 22' 44.46"to 92⁰ 22' 45.12"E respectively. The proposal covered under survey of India toposheet no.83 C/8 (Old) or 83C/SW (New). The area falls under seismic zone V.

2. The Member Secretary informed the Committee that PP vide email dated 30 January,2020, informed the Ministry that due to un-avoidable circumstances they are unable to attend the meeting. PP did not attend the meeting. The Committee **deferred** the proposal.

The meeting ended with thanks to the chair.

Annexure-I

Standard Terms of Reference (TOR) for Mining Project

- 1) Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
- 2) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 3) All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production

- levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
- 4) All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
 - 5) Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
 - 6) Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
 - 7) It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the proposed safeguard measures in each case should also be provided.
 - 8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
 - 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
 - 10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
 - 11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.

- 12) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 13) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
- 14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
- 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely

to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered.

- 20) Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
- 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
- 22) One season (non-monsoon) [i.e. March - May (Summer Season); October - December (post monsoon season); December - February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM₁₀, particularly for free silica, should be given.
- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 24) The water requirement for the Project, its availability and source should be

- furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
 - 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
 - 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
 - 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
 - 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be.
 - 30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and BGL. A schematic diagram may also be provided for the same.
 - 31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
 - 32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.

- 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- 35) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
- 36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
- 37) Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- 38) Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster Management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed: -
 - a) All documents to be properly referenced with index and continuous page numbering.

- b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
- c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
- f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
- g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
- h) As per the circular no. J-11011/618/2010-IA. II (I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) Sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

Annexure-II

Standard Tor Beneficiation

1. The alternate sites considered, the relative merits and demerits and the reasons for selecting the proposed site for the Beneficiation Plant should be indicated.
2. Details of the technology and process involved for beneficiation should be given.
3. Location of the proposed Plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant should be justified.
4. Treatment of run of mine (ROM) and or of the fines/waste dump should be spelt out.

5. Estimation of the fines going into the washings should be made and its management described.
6. Details of the equipment, settling pond etc. should be furnished.
7. Detailed material balance should be provided.
8. Sources of raw material and its transportation should be indicated. Steps proposed to be taken to protect the ore from getting air borne should be brought out.
9. Management and disposal of tailings and closure plan of the tailing pond, if any after the project is over, should be detailed in a quantified manner.
10. The water requirement for the project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should also be indicated.
11. A copy of the document in support of the fact that the Proponent is the rightful lessee of the unit should be given.
12. All documents including EIA and public hearing should be compatible with one another in terms of the production levels, waste generation and its management and technology and should be in the name of the lessee.
13. All corner coordinates of the Unit, superimposed on a High Resolution Imagery/Toposheet should be provided. Such an Imagery of the proposed Unit should clearly show the land use and other ecological features of the study area (core and buffer zone).
14. It should be clearly indicated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
15. Issues relating to Safety should be detailed. The proposed safeguard measures in each case should also be provided. Disaster management plan shall be prepared and included in the EIA/EMP Report.
16. The study area will comprise of 10 km zone around the Plant.
17. Cumulative impact study of both Beneficiation Plant with suggested mitigation measures as per the study should be described.
18. Location of Railway siding with its handling capacity and safety measures should be indicated.
19. Option to provide only silo for storage of minerals instead of open stacking to avoid fugitive dust should be explored and arrangements finalized justified.

20. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
21. Details of the land for any Over Burden Dumps outside the lease, such as extent of land area, distance from lease, its land use, R&R issues, if any, should be given.
22. A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the Project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
23. Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
24. Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
25. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
26. A study shall be got done to ascertain the impact of the Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required, should be worked out with cost implications and submitted.
27. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
28. A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such

- primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
29. Proximity to Areas declared as 'Critically Polluted' shall also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB/CPCB shall be secured and furnished to the effect that the proposed activities could be considered.
30. Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the unit w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
31. R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects, should be discussed in the report.
32. One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season); December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the unit in the pre-dominant downwind direction. The mineralogical composition of PM₁₀, particularly for free silica, should be given.
33. Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided.

The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.

34. The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
35. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be secured and copy furnished.
36. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
37. Impact of the project on the water quality, both surface and groundwater should be assessed and necessary safeguard measures, if any required, should be provided.
38. Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
39. A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the project. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to the pollution.
40. Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
41. Details of the onsite shelter and facilities to be provided to the workers should be included in the EIA report.
42. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area should be detailed.
43. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the

proposed remedial measures should be detailed along with budgetary allocations.

44. Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
45. Public hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
46. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
47. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
48. A brief background of the Project, its financial position, Group Companies and legal issues etc should be provided with past and current important litigations if any.
49. Benefits of the Project, if the project is implemented should be outlined. The benefits of the projects shall clearly indicate environmental, social, economic, employment potential, etc.
50. Besides the above, the below mentioned general points are also to be followed:-

a) Executive Summary of the EIA/EMP Report

b) All documents to be properly referenced with index and continuous page numbering.

c) Where data are presented in the report especially in Tables, the period in which the data were collected and the sources should be indicated.

d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the project.

e) Where the documents provided are in a language other than English, an English translation should be provided.

f) The Questionnaire for environmental appraisal of project as devised earlier by the Ministry shall also be filled and submitted.

g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006- IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should also be followed.

h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of

MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

i) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified Report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project by the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable

Annexure-III

Standard EC conditions as per Ministry's OM No. 22-34/2018-IA.III, dated 08.01.2019

I. Statutory compliance

- 1) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
- 2) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition

(Civil) No. 114 of 2014 in matter of Common Cause versus Union of India &Ors before commencing the mining operations.

- 3) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India &Ors.
- 4) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.
- 5) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.
- 6) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board/Committee.
- 7) The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.
- 8) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.
- 9) The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

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

II. Air quality monitoring and preservation

- 15) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

- 16) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

III. Water quality monitoring and preservation

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

Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

- 4) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.
- 5) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
- 6) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.
- 7) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards

prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

- 8) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

IV. Noise and vibration monitoring and prevention

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

V. Mining plan

- 12) The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management,

O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.

- 13) The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.
- 14) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

VI. Land reclamation

- 15) The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.
- 16) The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

- 17) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.
- 18) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.
- 19) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC.
- 20) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
- 21) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.
- 22) The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

VII. Transportation

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

VIII. Green Belt

- 25) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

- 26) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
- 27) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.
- 28) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.
- 29) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

IX. Public hearing and human health issues

- 30) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEFCC Regional Office and DGMS on half-yearly basis.

- 31) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.
- 32) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).
- 33) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities ,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1),Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not

have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having above indications.

- 34) The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
- 35) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.
- 36) The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

X. Corporate Environment Responsibility (CER)

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

XI. Miscellaneous

- 39) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the 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.

Annexure-IV

Recommendation of CSIR-NEERI Report on "Carrying Capacity Study for Environmentally Sustainable Iron and Manganese Ore Mining Activity in Keonjhar, Sundargarh and Mayurbhanj districts of Odisha State:

The Committee has also deliberated the various specific recommendations of carrying capacity study report conducted by CSIR-NEERI w.r.t. mining proposal of Iron Ore and/or manganese in the State of Odisha. There are recommendation which needs to be implemented by the State Govt. of Odisha and Project Proponent.

- 1) Project Proponent and Department of Steel & Mines, Govt. of Odisha shall ensure the implementation of recommendations of carrying capacity study report conducted by CSIR-NEERI w.r.t. mining proposal of Iron Ore and/or manganese in the State of Odisha.

- 2) Department of Steel & Mines, Govt. of Odisha should prepare 5 years regional plan for annual iron ore requirement from the state, which in turn shall be met from different mines/zones (e.g. Joda, Koira.) in the state. Accordingly, sustainable annual production (SAP) for each zone/mine may be followed adopting necessary environmental protection measures.
- 3) Project Proponent shall construct the cement concrete road from mine entrance and exit to the main road with proper drainage system and green belt development along the roads and also construction of road with minimum 300 m inside the mine. This should be done within one year for existing mines and new mine should have since beginning. The Department of Steel & Mines, Govt. of Odisha should ensure the compliance and should not issue the Mining Permits, if mine lease holder has not constructed proper cement concrete road as suggested.
- 4) The Committee observed that as per the recommendations of NEERI report the PP needs to do regular vacuum cleaning of all mineral carrying roads aiming at "zero dust re-suspension" within 3 months.
- 5) Project Proponent shall monitor the environmental quality parameters as per EC and CTE/CTO conditions, and implementation of suggested measures for control of road dust and air pollution. Odisha State Pollution Control Board has to ensure the compliance of CTE/CTO. Regional office of the MoEF&CC, Bhubaneswar shall monitor the compliance of the EC conditions. Regional office of the Indian Bureau of Mines (IBM) shall monitor the compliance of mining plan and progressive mine closure plan. Any violation by mine lease holder may invite actions per the provisions of applicable Acts.
- 6) Project Proponent shall ensure the compliance of Suggested Ore Transport Mode (SOTM) with association of the State Government of Odisha. All existing mines should ensure adoption of SOTM within next 5 years. New mines or mines seeking expansion should incorporate provision of SOTM in the beginning itself, and should have system in place within next 5 years.
- 7) The State Govt. of Odisha shall ensure dust free roads in mining areas wherever the road transportation of mineral is involved. The road shoulders shall be paved with fence besides compliance with IRC guidelines. All the roads should have proper drainage system and apart from paving of entire carriage width the remaining right of way should have native plantation (dust capturing species). Further, regular maintenance should also be ensured by the Govt. of Odisha. Progress on development of dust free roads, implementation of SOTM, increased use of existing rail network, development of additional railway network/conveyor belt/ pipelines etc. shall be submitted periodically to Regional office of the MoEF&CC.

- 8) Project Proponent shall develop the parking plazas for trucks with proper basic amenities/ facilities inside the mine. This should be done within one year for existing mines and new mines should have since beginning.
- 9) Department of Steel & Mines shall ensure the construction of NH 215 as minimum 4 lane road with proper drainage system and plantation and subsequent regular maintenance of the road as per IRC guidelines. Construction of other mineral carrying roads with proper width and drainage system along with road side plantation to be carried out. This shall be completed within 2 Years.
- 10) Regular vacuum cleaning of all mineral carrying roads aiming at "Zero Dust Re- suspension" shall be adopted by PWD / NHAI/ Mine Lease Holders within a time Period of 3 months for existing roads..
- 11) In case the total requirement of iron ore exceeds the suggested limit for that year, permission for annual production by an individual mine may be decided depending on approved EC capacity (for total actual dispatch) and actual production rate of individual mine during last year or any other criteria set by the State Govt., i.e. Dept. of Steel & Mines. Department of Steel and Mines in consultation with Indian Bureau of Mines-RO should prepare in advance mine-wise annual production scenario so that demand for iron ore can be anticipated, and actual production/dispatch does not exceed the suggested annual production.
- 12) R&D studies towards utilization of low-grade iron ore should be conducted through research/academic institutes like IMMT, Bhubaneswar, NML, Jamshedpur, and concerned metallurgical departments in IITs, NITs etc., targeting full utilization of low-grade iron ore (Fe content upto 45% by 2020 and upto 40% by 2025). In fact, life cycle assessment of whole process including environmental considerations should be done for techno-economic and environmental viability. R&D studies on utilization of mine wastewater having high concentration of Fe content for different commercial applications in industries such as cosmetics, pharmaceutical, paint industry should also be explored. Responsibility: IBM, Dept. of Steel & Mines, Individual Mine Lease Holders.
- 13) The mining activity in Joda-Koira sector is expected to continue for another 100 years, therefore, it will be desirable to develop proper rail network in the region. Rail transport shall not only be pollution free mode but also will be much economical option for iron ore transport. The rail network and/or conveyor belt system upto public railway siding needs to be created. The total length of the conveyor belt system/ rail network to be developed from mines to nearest railway sidings by 11 mines in Joda region is estimated to be about 64 km. Similarly, in Koira region, total length of rail network/ conveyor system for 8 mines (under SOTM 1 & 2) is estimated to be around 95 km. Further, it is suggested to develop a rail network connecting Banspani (Joda region) and Roxy railway sidings in Koira region.

Responsibility: Dept. of Steel & Mines, Govt. of Odisha and Concerned Mines along with Indian Railways. Time Period: Maximum 7 years (by 2025). The Department of Steel & Mines, Govt. of Odisha should follow-up with the concerned Departments and railways so that proposed proper rail network is in place by 2025.

14) State Govt. of Odisha shall make all efforts to ensure exhausting all the iron & manganese ore resources in the existing working mines and from disturbed mining leases/zones in Joda and Koira region. The criteria suggested shall be applicable while suggesting appropriate lease area and sustainable mining rate. Responsibility: Dept. of Steel & Mines, Govt. of Odisha.

15) **Mining Operations/Process Related:** Project Proponent shall implement the following mitigation measures: (i) Appropriate mining process and machinery (viz. right capacity, fuel efficient) should be selected to carry out various mining operations that generate minimal dust/air pollution, noise, wastewater and solid waste. e.g. drills should either be operated with dust extractors or equipped with water injection system. (ii) After commencement of mining operation, a study should be conducted to assess and quantify emission load generation (in terms of air pollution, noise, waste water and solid waste) from each of the mining activity (including transportation) on annual basis. Efforts should be made to further eliminate/ minimize generation of air pollution/dust, noise, wastewater, solid waste generation in successive years through use of better technology. This shall be ensured by the respective mine lease holders. (iii) Various machineries/equipment selected (viz. dumpers, excavators, crushers, screen plants etc.) and transport means should have optimum fuel/power consumption, and their fuel/power consumption should be recorded on monthly basis. Further, inspection and maintenance of all the machineries/equipment/ transport vehicles should be followed as per manufacturer's instructions/ recommended time schedule and record should be maintained by the respective mine lease holders. (iv) Digital processing of the entire lease area using remote sensing technique should be carried out regularly once in 3 years for monitoring land use pattern and mining activity taken place. Further, the extent of pit area excavated should also be demarcated based on remote sensing analysis. This should be done by ORSAC (Odisha Space Applications Centre, Bhubaneswar) or an agency of national repute or if done by a private agency, the report shall be vetted/ authenticated by ORSAC, Bhubaneswar. Expenses towards the same shall be borne by the respective mine lease holders. Responsibility: Individual Mine Lease Holders.

16) **Air Environment Related:** Project Proponent shall implement the following mitigation measures: (i) Fugitive dust emissions from all the sources should be controlled regularly on daily basis. Water spraying arrangement on haul roads, loading and unloading and at other transfer points should be provided and properly maintained. Further, it will be desirable to use water

fogging system to minimize water consumption. It should be ensured that the ambient air quality parameters conform to the norms prescribed by the CPCB in this regard. (ii) The core zone of mining activity should be monitored on daily basis. Minimum four ambient air quality monitoring stations should be established in the core zone for SPM, PM₁₀, PM_{2.5}, SO₂, NO_x and CO monitoring. Location of air quality monitoring stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board (based on Emission Load Assessment Study). The number of monitoring locations may be more for larger capacity mines and working in larger area. Out of four stations, one should be online monitoring station in the mines having more than 3 MTPA EC Capacity. (iii) Monitoring in buffer zone should be carried out by SPCB or through NABET accredited agency. In addition, air quality parameters (SPM, PM₁₀, PM_{2.5}, SO₂, NO_x and CO) shall be regularly monitored at locations of nearest human habitation including schools and other public amenities located nearest to source of the dust generation as applicable. (iv) Emissions from vehicles as well as heavy machinery should be kept under control and regularly monitored. Measures should be taken for regular maintenance of vehicles used in mining operations and in transportation of mineral. (v) The vehicles shall be covered with a tarpaulin and should not be overloaded. Further, possibility of closed container trucks should be explored for direct to destination movement of iron ore. Air quality monitoring at one location should also be carried out along the transport route within the mine (periodically, near truck entry and exit gate), Responsibility: Individual Mine Lease Holders and SPCB.

17) **Noise and Vibration Related:** Project Proponent shall implement the following mitigation measures: (i) Blasting operation should be carried out only during daytime. Controlled blasting such as Nonel, should be practiced. The mitigation measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented. (ii) Appropriate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs. (iii) Noise levels should be monitored regularly (on weekly basis) near the major sources of noise generation within the core zone. Further, date, time and distance of measurement should also be indicated with the noise levels in the report. The data should be used to map the noise generation from different activities and efforts should be made to maintain the noise levels with the acceptable limits of CPCB (CPCB, 2000) (iv) Similarly, vibration at various sensitive locations should be monitored atleast once in month, and mapped for any significant changes due to successive mining operations. Responsibility: Individual Mine Lease Holders.

18) **Water/Wastewater Related:** Project Proponent shall implement the following mitigation measures: (i) In general, the mining operations should

be restricted to above ground water table and it should not intersect groundwater table. However, if enough resources are estimated below the ground water table, the same may be explored after conducting detailed geological studies by GSI and hydro- geological studies by CGWB or NIH or institute of national repute, and ensuring that no damage to the land stability/ water aquifer system shall happen. The details/ outcome of such study may be reflected/incorporated in the EIA/EMP report of the mine appropriately. (ii) Natural watercourse and/or water resources should not be obstructed due to any mining operations. Regular monitoring of the flow rate of the springs and perennial nallas should be carried out and records should be maintained. Further, regular monitoring of water quality of nallas and river passing thorough the mine lease area (upstream and downstream locations) should be carried out on monthly basis. (iii) Regular monitoring of ground water level and its quality should be carried out within the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out on monthly basis. (iv) In order to optimize water requirement, suitable conservation measures to augment ground water resources in the area should be undertaken in consultation with Central Ground Water Board (CGWB). (v) Suitable rainwater harvesting measures on long term basis should be planned and implemented in consultation with CGWB, to recharge the ground water source. Further, CGWB can prepare a comprehensive plan for the whole region. (vi) Appropriate mitigation measures (viz. ETP, STP, garland drains, retaining walls, collection of runoff etc.) should be taken to prevent pollution of nearby river/other water bodies. Water quality monitoring study should be conducted by State Pollution Control Board to ensure quality of surface and ground water sources on regular basis. The study can be conducted through NABL/ NABET approved water testing laboratory. However, the report should be vetted by SPCB. (vii) Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated in ETP so as to conform to the discharge standards applicable. (viii) Oil and grease trap should be installed before discharge of workshop effluents. Further, sewage treatment plant should be installed for the employees/colony, wherever applicable. (ix) Mine lease holder should ensure that no silt originating due to mining activity is transported in the surface water course or any other water body. Appropriate measures for prevention and control of soil erosion and management of silt should be undertaken. Quantity of silt/soil generated should be measured on regular basis for its better utilization. (x) Erosion from dumps site should be protected by providing geo-textile matting or other suitable material, and thick plantation of native trees and shrubs should be carried out at the dump slopes. Further, dumps should be protected by retaining walls. (xi) Trenches / garland drain should be constructed at the foot of dumps to arrest silt from being carried to water bodies. Adequate number of check dams should be constructed across seasonal/perennial nallas (if any) flowing through the mine lease areas and silt be arrested. De-silting at regular intervals should be carried out and quantity should be recorded for its better utilization, after proper soil quality analysis. (xii) The

water so collected in the reservoir within the mine should be utilized for the sprinkling on hauls roads, green belt development etc. (xiii) There should be zero waste water discharge from the mine. Based on actual water withdrawal and consumption/ utilization in different activities, water balance diagram should be prepared on monthly basis, and efforts should be made to optimize consumption of water per ton of ore production in successive years. Responsibility: Individual Mine Lease Holders, SPCB and CGWB.

- 19) **Land/ Soil/ Overburden Related:** Project Proponent shall implement the following mitigation measures: (i) The top soil should temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long (not more than 3 years or as per provisions mentioned in the mine plan/scheme). The topsoil should be used for land reclamation and plantation appropriately. (ii) Fodder plots should be developed in the non-mineralised area in lieu of use of grazing land, if any. (iii) Over burden/ low grade ore should be stacked at earmarked dump site (s) only and should not be kept active for long period. The dump height should be decided on case to case basis, depending on the size of mine and quantity of waste material generated. However, slope stability study should be conducted for larger heights, as per IBM approved mine plan and DGMS guidelines. The OB dump should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles should be undertaken for stabilization of the dump. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Proper records should be maintained regarding species, their growth, area coverage etc. (iv) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine operation, soil, OB and mineral dumps. The water so collected can be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly de-silted, particularly after monsoon and should be maintained properly. Appropriate documents should be maintained. Garland drain of appropriate size, gradient and length should be constructed for mine pit, soil, OB and mineral dumps and sump capacity should be designed with appropriate safety margin based on long term rainfall data. Sump capacity should be provided for adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and de-silted at regular intervals. (v) Backfilling should be done as per approved mining plan/scheme. There should be no OB dumps outside the mine lease area. The backfilled area should be afforested, aiming to restore the normal ground level. Monitoring and management of rehabilitated areas should continue till the vegetation is established and becomes self-generating. (vi) Hazardous waste such as, waste oil, lubricants, resin, and coal tar etc. should be disposed off as per provisions of Hazardous Waste Management Rules, 2016, as amended from time to time. Responsibility: Individual Mine Lease Holders.

20) **Ecology/Biodiversity (Flora-Fauna) Related:** Project Proponent shall implement the following mitigation measures: (i) All precautionary measures should be taken during mining operation for conservation and protection of endangered fauna namely elephant, sloth bear etc. spotted in the study area. Action plan for conservation of flora and fauna should be prepared and implemented in consultation with the State Forest and Wildlife Department within the mine lease area, whereas outside the mine lease area, the same should be maintained by State Forest Department. (ii) Afforestation is to be done by using local and mixed species saplings within and outside the mining lease area. The reclamation and afforestation is to be done in such a manner like exploring the growth of fruit bearing trees which will attract the fauna and thus maintaining the biodiversity of the area. As afforestation done so far is very less, forest department needs to identify adequate land and do afforestation by involving local people in a time bound manner. (iii) Green belt development carried out by mines should be monitored regularly in every season and parameters like area under vegetation/plantation, type of plantation, type of tree species /grass species/scrubs etc., distance between the plants and survival rate should be recorded. (iv) Green belt is an important sink of air pollutants including noise. Development of green cover in mining area will not only help reducing air and noise pollution but also will improve the ecological conditions and prevent soil erosion to a greater extent. Further, selection of tree species for green belt should constitute dust removal/dust capturing plants since plants can act as efficient biological filters removing significant amounts of particulate pollution. Thus, the identified native trees in the mine area may be encouraged for plantation. Tree species having small leaf area, dense hair on leaf surface (rough surface), deep channels on leaves should be included for plantation. (v) Vetiver plantation on inactive dumps may be encouraged as the grass species has high strength of anchoring besides medicinal value. (vi) Details of compensatory afforestation done should be recorded and documented by respective forest divisions, and State Forest Department should present mine-wise annual status, along with expenditure details. Responsibility: Individual Mine Lease Holders and State Forest & Wildlife Department.

21) **Socio-Economic Related:** Project Proponent shall implement the following mitigation measures: (i) Public interaction should be done on regular basis and social welfare activities should be done to meet the requirements of the local communities. Further, basic amenities and infrastructure facilities like education, medical, roads, safe drinking water, sanitation, employment, skill development, training institute etc. should be developed to alleviate the quality of life of the people of the region. (ii) Land outtees and land losers/affected people, if any, should be compensated and rehabilitated as per the national/state policy on Resettlement and Rehabilitation. (iii) The socio-economic development in the region should be focused and aligned with the guidelines/initiatives of Govt. of India/ NITI Aayog around prosperity, equality, justice, cleanliness, transparency, employment, respect to women, hope etc. This can be achieved by providing adequate and

quality facilities for education, medical and developing skills in the people of the region. District administration in association with mine lease holders should plan for "Samagra Vikas" of these blocks well as other blocks of the district. While planning for different schemes in the region, the activities should be prioritized as per Pradhan Mantri Khanij Kshetra Kalyan Yojna (PMKKKY), notified by Ministry of Mines, Govt. of India, vide letter no. 16/7/2017-M.VI (Part), dated September 16, 2015. Responsibility: District Administration and Individual Mine Lease Holders.

22) **Road Transport Related:** Project Proponent shall implement the following mitigation measures: (i) All the mine lease holders should follow the suggested ore transport mode (SOTM), based on its EC capacity within next 5 years. (ii) The mine lease holders should ensure construction of cement road of appropriate width from and to the entry and exit gate of the mine. Further, maintenance of all the roads should be carried out as per the requirement to ensure dust free road transport. (iii) Transportation of ore should be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore/dust takes place. Further, air quality in terms of dust, PM₁₀ should be monitored near the roads towards entry & exit gate on regular basis, and be maintained within the acceptable limits. Responsibility: Individual Mine Lease Holders and Dept. of Steel & Mines.

23) **Occupational Health Related:** Project Proponent shall implement the following mitigation measures: (i) 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 periodically. (ii) Occupational health surveillance program for all the employees/workers (including casual workers) should be undertaken periodically (on annual basis) to observe any changes due to exposure to dust, and corrective measures should be taken immediately, if needed. (iii) Occupational health and safety measures related awareness programs including identification of work related health hazard, training on malaria eradication, HIV and health effects on exposure to mineral dust etc., should be carried out for all the workers on regular basis. A full time qualified doctor should be engaged for the purpose. Periodic monitoring (on 6 monthly basis) for exposure to respirable minerals dust on the workers should be conducted, and record should be maintained including health record of all the workers. Review of impact of various health measures undertaken (at an interval of 3 years or less) should be conducted followed by follow-up of actions, wherever required. Occupational health centre should be established near mine site itself. Responsibility: Individual Mine Lease Holders and District Administration (District Medical Officer).

Annexure-V

Standard EC conditions for Mineral Beneficiation Plants:

Standard EC conditions for mineral beneficiation plants which are mentioned in Ministry's OM No. 22-234/2018-IA-III dated 09th August 2018.

LIST OF EXPERT APPRAISAL COMMITTEE (Non Coal Mining Sector)

Sl. No.	Name and address	Designation	Signature 30.01.2020	Signature 31.01.2020
1.	Dr. S.R. Wate, 148/149, Nagar Vikas Society, Varendra Nagar, Nagpur-440015, Maharashtra	Chairman		
2.	Dr. Ajay Deshpande, Flat A-101, Pristine Privilege Apartments, Opposite Pitru, Near Rohar Nilay, Behind Spicer College, Aundh, Pune 411007, Maharashtra	Member		
3.	Shri G.P. Kundargi, Plot No. 32, MOIL Vatika, Chincholi Road, Fetri, Nagpur 441501, Maharashtra	Member		
4.	Dr. A.K. Malhotra, C-6, Subhavana Niketan, Road No. 41, Pitampura, Delhi-110034	Member		
5.	Dr. Gurdeep Singh, Department of Environmental Science & Engg. Indian Institute of Technology (Indian School of Mines), Dhanbad-826004	Member		
6.	Shri B Ramesh Kumar, H.No. 6 L-134/6, Bahram Compound, Padmarao Nagar, Secunderabad-500025, Andhra Pradesh	Member		
7.	Dr. Asha Rajwansi, WII, P.B.# 18, Chandrabani, Dehradun-248001, Uttarakhand	Member		
8.	Prof. S. Ramakrishna Rao, D.No. 50 170-9/i, North Ext., Scotharimadhara, Visakhapatnam-530013, Andhra Pradesh	Member		
9.	Shri Santosh Gupta, Flat No. 405, Gaur Green Vista, NyayKhand-I, Indrapuram, Ghaziabad, UP-201014	Member		
10.	Dr. Parimal Chandra Bhattacharjee, A/3 Asiyana Housing Complex Muligaon, Guwahati- 781011, Assam	Member		
11.	Prof. Mukesh Khare, Department of Civil Engineering, IIT, Delhi	Member		
12.	Representative of DGMS Head Office, Samar Patel Nagar, Dhanbad, Jharkhand 826002 dg@dgms.gov.in	Member		
13.	Shri Mantu Biswas, Controller of Mines, IBM Block D, Second Floor, Indira Shayan, Civil Lines, Nagpur 440001	Member		
14.	Shri V.K. Soni, Scientist 'F', IMD, New Delhi - 110 003	Member		
15.	Shri. Sundeep, Director IA-Division (Non-coal Mining sector) Agni-A106, Indira Paryavaran Bhawan, Ministry of Environment, Forest & Climate Change, Jorbagh Road, New Delhi-110003	Member Secretary		

Agenda for 13th EAC Meeting to be held on during 30-31st January, 2020