

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

SUMMARY RECORD OF 1st MEETING OF THE COMMITTEE OF THE EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF NON-COAL MINING PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The 1st 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 22-23, 2019**. 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) Welcome to the Re-constituted Expert Appraisal Committee: The Chairman has welcomed the newly constituted Expert Appraisal Committee and explained the procedure and mandate of the Committee

(1.2) Presentation on the provisions of the EIA Notification, 2006.

Initially, the Dr. R.B. Lal, Additional Director, MoEFCC and Member Secretary of the EAC welcomed the new members and briefed about the issues related to the non-coal mining sector and the process involved in organizing EAC meetings. Subsequently, Dr. Lal, gave a power point presentation on the provisions of the EIA Notification, 2006 and online submission process involved in the Environmental clearance on PARIVESH portal. Shri Amit Vashishtha, Scientist 'D' of the Ministry has also made a presentation on the various issues related to sand mining.

Dr. Sanjeev Goyal, Sr. Principal Scientist, NEERI made a presentation on the outcome and various recommendations of the study of carrying capacity of Iron and Manganese ore mining in State of Odisha.

After this, Dr. S.R. Wate, Chairman of the EAC gave an introductory remark to the Committee members. The Chairman has nominated Dr. Ajay Deshpande as the Vice Chairman of the EAC (Non-coal Mining) with his consent.

Day 1 : January 22, 2019 [Tuesday]

Consideration of Proposals

(2.1). Expansion of Lead-Zinc Ore Underground Mine from 1.08 million TPA to 2.0 million TPA (Total Excavation .48 million TPA) & Lead-Zinc Ore Beneficiation from 1.2 million TPA to 2.5 million TPA of Rajpura Dariba Mine by M/s Hindustan Zinc Ltd. Having mining lease area 1142.2106 & ML No. 166/2008, Located at Tehsil Relmagra, Distt- Rajsamand, Rajasthan, (File No. J11015/84/2018-IA. II(M); Proposal No. IA/RJ/MIN/86877/2018) – Consideration of EC

The proposal is for the expansion of Rajpura Dariba Lead – Zinc underground mine from 1.08 million TPA to 2.0 million TPA and rock waste generation of 0.48 million TPA (Total Excavation will be 2.48 million TPA). After proposed expansion, production capacity of Beneficiation will be 2.5 million TPA, of which 2.0 million TPA ore will be beneficiated from Rajpura Dariba Mine and 0.5 million TPA from other mines of Hindustan Zinc Ltd. The mine lease area is 1142.2106 ha. The mine is located at Tehsil Relmagra, District Rajsamand, Rajasthan. The Mining Lease area falls in Survey of India Topo-sheet No. 45K/4 and 45L/1 and lies between Latitudes 24°55'40.8" N - 24°57'49.0" N and Longitudes 74°06'57.7" E - 74°08'41.4" E. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS. The project falls under Schedule 1(a) of mining and is a Category- "A" project as per EIA notification 14th September 2006 and as per S.O. (E) 3977 dated 14.08.2018, as the mining lease area is less than 100 Ha. As the beneficiation is also involved PP also applied under Schedule 2(b) of EIA Notification 2006.

The PP vide proposal No IA/RJ/MIN/75956/2018 applied online for grant of ToR on 26.07.2018 and submitted Form-1 and Pre-Feasibility Report. The proposal was considered in EAC meeting held on August 23-24, 2018 wherein the Committee recommended for grant of ToR expansion of Rajpura Dariba Lead – Zinc underground mine from 1.08 million TPA to 2.0 million TPA and rock waste generation of 0.48 million TPA (Total Excavation will be 2.48 million TPA). After proposed expansion, production capacity of Beneficiation will be 2.5 million TPA, of which 2.0 million TPA ore will be beneficiated from Rajpura Dariba Mine and 0.5 million TPA from other mines of Hindustan Zinc Ltd. The ToR was issued vide Lr. No. J-11015/84/2018-IA-II (M) dated 27.09.2018. The PP applied online vide proposal No IA/RJ/MIN/86877/2018 on 07.01.2019 for grant of EC and submitted EIA/EMP Report after conducting Public Hearing. The Proposal for EC is placed in EAC Meeting held during January, 22-23, 2019.

The PP reported that the Mining lease was granted on 31.03.1970 and registered on 30.05.1970 for a period of 20 years which was subsequently renewed on 16.09.1993 and 12.06.2012 for additional 20 years by Government of Rajasthan under the MMDR 1957. Rajpura Dariba is an underground mine with beneficiation facilities. The commencement of ore beneficiation took place at RD mine in the year 1982. The PP submitted LR No खअ/राज-11/सीसी/मेजर/एमएल-166/2008/2481 dated 30.10.2012 issued by State Govt. as per which

validity of the mining lease is up to 29th May 2030. The PP submitted letter No dated 1.12.2007 issued by Mining Officer Rajasmand wherein it has mentioned that proposed mining lease does not come under Aravalli Range.

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

Observation of EAC: The PP has mentioned that mineable reserved will be 30.94 million Tonne but the ore production proposed from 2019-20 to 2029-30 is 21.25 million tonne. There is a difference of 9.96 million tonne. Thus, PP needs to submit the flow chart clearly shows the material balance from initial excavation till final product & utilization/disposal of waste.

The PP in EIA Report submitted that total waste generation over the life of mine will be 42.0 Lakh m³ out of which 40.0 Lakh will be deposited in underground voids and remaining 2.0 lakh m³ will be disposed externally. The PP submitted that waste to be utilized for construction of tailing dam will be 2.0 Lakh m³. The PP submitted that existing area of the waste dump is 2 ha and additional 3 ha will be required for waste dumping. Thus, the total area under waste dump will be 5 Ha.

Observation of EAC: The Committee is of the view that PP has proposed to use waste for the construction of the tailing dam but for use of any waste requires PP to pay royalty. The Committee also observed that tailing dam is mainly located outside the mining lease area. The PP also proposed additional area for the waste dump thus PP should clearly show on the map area proposed for the dumping of the waste. In addition to above details of geological reserves and material balance needs to be provided.

The PP submitted that the water is being drawn from the Matrikundia dam in Banas River through a 22 km pipeline up to the plant. It is stated that the plant is being operated since last two years on 100% recycle water and it is planned to operate with 100% recycle water in next five years and for future also. In RDM the fresh water is using only for drinking purpose which is supplied for industrial, colony and nearby villages. For 2.0 MTPA mining & existing beneficiation capacities, additional water of 2200 m³ /day is required for proposed expansion over existing 5800 m³ /day requirement. Thus the total water requirement shall be 8000 m³/day. Mine dewatering due to intersection will also be

consumed in the process. The main source of water will be from Sewage Treatment Plant at Udaipur, Mansi Wakal, and Matrikundia Dam. The PP also submitted the NOC obtained vide Letter No 21-4(315)/WR/CGWA/2008-212 dated 14.07.2009 for mine dewatering wherein it has inter-alia mentioned that "the firm may dewater accumulated ground water in mining pits @ 446.50 m³/day due to seepage and intersection of water table". This approval was valid till 2 years from date of issuance of letter i.e. up to 13.07.2011. The PP also submitted renewal of NOC obtained vide LR No 21-4(315)/WR/CGWA/2008-1905 dated 16.11.2017 wherein the permission for dewater the accumulated ground water in mining pits @ 446.50 m³/day due to seepage and intersection of water table was provided. This NOC is valid for 3 years i.e. up to 15.11.2020. The PP has also submitted the detailed Hydrogeological Study Conducted by Hydro Geosurvey Consultant Pvt Ltd.

Observation of EAC: PP did not submit any documents regarding permission of CGWA for the period between 14.07.2011 till 15.11.2017. Further, it is not clear from Hydrogeological Studies that who are the experts involved in the preparation of the same. Report is not certified by any Scientists. The permission for dewatering is 446.50 m³/day but as per Hydrogeological studies PP is withdrawing 3145 m³/day. Thus, PP is required to submit a flow chart clearly showing the water balance.

The PP submitted that the mine area is already having 35 % green belt and now it is further suggested that approx. 6000 trees (Local trees species like: Cassia fistula, Delbergiasissoo, Delonixregia, Polyalthialongifoliaetc) will be planted in the mine area and nearby villages, to reduce the impact of expansion activities in the surroundings of the existing mine site. PP submitted the species like Sitafal, PeeliKaner, Beshram/Behaya, Gurhal, Jasund, Peepal, Shesham, Bel, Jungle Jalebi, Amaltas, Palas, Dhak, Neem, Ashok, and Arjun shall be planted at the both sides of the mining area & road connecting mining lease. Further, Species like Aam, PeeliKaner, Beshram/Behaya, Peepal, Jamun, Gulmohar, Sahajan, Amaltas, Palas, Dhak, Neem, Ashok, Desi Badam and Arjun shall be planted on the road passing through nearest village.

Observation of EAC: PP did not provide the details of plantation or area under green belt at the conceptual stage. Thus, PP needs to submit a map clearly showing the area to be covered under plantation (at an interval of 5 years till the life of mine) with latitude & longitude. It is also to be mentioned here that PP has not shown any increase in green belt area rather proposed for increasing the density of plantation. It has observed that within the mining lease area there is Govt. land and Charagha land wherein PP can develop green belt and afforestation. Thus, PP needs to demarcate the Govt. & Charagha Land on the Satellite Imaginary so as to see status of land use. Whether the PP has provided alternative land in lieu of Charagha Land needs to be submitted.

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

that there is no National Park, Wildlife Sanctuary, Ramsar Site, Tiger/Elephant Reserve within core and buffer zone of the mining lease.

The PP submitted the authenticated list of flora & fauna present in the within 10 KM of the project site. The PP submitted that there are 8 schedule-1 species viz. Indian Peafowl, Indian Grey Horn Bill, Black Shoulder Kite, White Eyed Buzzard, Indian Monitor Lizard, Indian Flapshell Turtle, Indian Pythone and Indian Leopard present in the study area. The PP also submitted the Wildlife Conservation Plan (WCL) prepared for the protection of Schedule-1 Species. The amount proposed under WCL is 26.0 Lakh for five years.

Observation of EAC: PP did not submit the proof of submission of WCP to Chief Wildlife Warden and also the plan is only for five years but life of mine is more than 15 years. The Committee also asked the PP that how they will ensure that amount proposed for conservation plan will be spent in the activities proposed in Conservation Plan. The Committee finally asked the PP to submit Wildlife Conservation Plan duly approved by Chief Wildlife Warden and also monitoring mechanism for implementation of the same. The Conservation Plan should be prepared as per suggestion provided by the Committee members during the meeting.

PP reported that the baseline data on micrometeorology, Air, Water, Noise & Soil has been generated during Summer Season (March, 2017 – May, 2017). The monitoring results of ambient air for SO₂, NO₂, PM₁₀ and PM_{2.5} are within the prescribed NAAQS Standards. The water quality of ground water samples was found to be within the prescribed IS: 10500 norms except some locations. The monitored ambient noise levels were within the limit values for Industrial & Residential areas. The results of the soil samples show that soil is sandy loamy in texture and neutral in nature. The nutrient and organic contents are medium and the soil is normally fertile.

Observation of EAC: One season data was required to be collected as per ToR Point no 24 but in the instant case PP has collected Noise Level Data for only Month of April 2017 only. The Committee also observed that the air quality modeling is not carried for total excavation. Further, the modeling has been done for proposed expansion quantity. Thus, the Committee also desired that modeling should be done for both i) total excavation including the expansion and ii) only for expanded quantity as proposed by PP. The PP should ensure that both the scenarios (worst & control case) should be presented before the Committee.

Public hearing for the project was conducted on 29.10.2018 at 11:00 A.M. at Rajpura Dariba Mine Complex, Tehsil: Relmagra, Dist: Rajsamand, Rajasthan. The public hearing was chaired by Shri Shyam Lal Gujar, District collector & District Magistrate, Rajsamand. The advertisement for public hearing was published in '*Rajasthan Patrika*' (28.09.2018) and '*Times of India*' (28.09.2018). The Committee deliberated on the issues raised during the public hearing and the major issued raised by the local people were related to assistance in farming, drinking water supply, medical facilities, employment, roads, work to small contractors, education, crop compensation, pollution, employment to widows, discharge of

chemical in pond, Gau Shala and water facility for animals, CSR activities to be extended etc.

The PP proposed Rs 16.5 Crores under CER @ 2.5% of Project Cost. But during the meeting PP submitted that based on expansion cost it come out to be around 3.0 Crores. PP reported that there is no court case/ litigation pending against the project.

Observation of EAC: The Committee is of the view that PP should submit the activity wise, time bound along with budgetary provision for the activities proposed in the CER.

The Committee took note of the Compliance Report of MoEF&CC, R.O. Lucknow dated 26.11.2018 in respect of EC granted vide Lr No J-11015/380/2008-IA. II(M) dated 04.11.2009 and noted that PP has complied most of the conditions and minor violation are reported by the Regional Office, Lucknow. The PP submitted that the as no (R & R) is involved in this project.

Observation of EAC: The PP further obtained the EC for expended capacity i.e. from 0.9 million TPA to 1.08 million TPA of ore production vide letter no. J-110015/380/2008-IA II (M) dated 26.07.2018 under clause 7 (ii) of EIA notification, 2006. But the compliance of this EC condition is not mentioned in the compliance report. The Committee is also of the view that PP should comply with the minor violation reported by the Regional Office and implementation of the same needs to be submitted.

The Project Proponent submitted that the budget earmarked for Environmental Management Plan (EMP) shall be ₹ 110 Crores (Capital) & ₹ 6.95 Crores (Recurring) which include [Dust control/suppression systems ₹ 0.8 Crores (Capital) & ₹ 1.5 Crores (Recurring); Tailing Dam management/ Dry Tailing Disposal ₹ 16.0 Crores (Capital) & ₹ 2.0 Crores (Recurring); Tailing thickener ₹ 0.5 Crores (Capital) & ₹ 0.2 Crores (Recurring); Surface water sprinkler ₹ 0.75 Crores (Capital) & ₹ 0.1 Crores (Recurring); Mechanical road sweeper ₹ 0.75 Crores (Capital) & ₹ 0.1 Crores (Recurring); Ventilation System ₹ 6.0 Crores (Capital) & ₹ 1.0 Crores (Recurring); Rainwater harvesting measures/ Deepening of existing Village Tanks ₹ 55.1 Crores (Capital) & ₹ 0.11 Crores (Recurring); Plantation/Green belt development with drip irrigation system ₹ 3.0 Crores (Capital) & ₹ 0.2 Crores (Recurring); Different Environmental Monitoring equipment ₹ 0.3 Crores (Capital) & ₹ 0.04 Crores (Recurring); Automation in Environment Monitoring (CAAQMs) ₹ 2.5 Crores (Capital) & ₹ 0.2 Crores (Recurring); Construction of Garland drain and silt settling tank and recycle system for waste dump management ₹ 0.25 Crores (Capital) & ₹ 0.05 Crores (Recurring); Schedule-I fauna conservation plan cost ₹ 2.0 Crores (Capital) & ₹ 0.05 Crores (Recurring); Installation of Oil grease trap system & Sewage treatment plant ₹ 3.05 Crores (Capital) & ₹ 0.2 Crores (Recurring); Water hydrant system ₹ 0.25 Crores (Capital) & ₹ 0.05 Crores (Recurring); High density/ Paste Fill ₹ 16.5 Crores (Capital) & ₹ 1.1 Crores (Recurring); Hazardous waste storage facility ₹ 0.5 Crores (Capital) & ₹ 0.0 Crores (Recurring); Bag filters/ de-dusting system ₹ 2.0 Crores (Capital) & ₹ 0.0 Crores (Recurring) and Mobile Water tankers ₹ 0.25 Crores (Capital) & ₹ 0.05 Crores (Recurring)]

Observation of EAC: The PP did not submit the activity-wise time bound action plan for the EMP so that the same can be monitored after grant of EC.

The Project Proponent submitted that the total project cost shall be ₹ 960 Crore (Capital) & ₹ 0.0 Crore (Recurring) and shall give employment to 1250.

Observation of EAC: Although PP has mentioned the recurring cost but the PP did not mentioned the amount for the same. PP has mentioned that employment figures but its not clear whether it is direct or indirect employment.

The Consultant Gurang Environmental Solution Pvt. Ltd. has submitted the disclosure of the consultant engaged and also confirm shall the consultant organization shall be fully accountable for any misleading information mentioned in this statement.

Observation of EAC: Both PP & Consultant should submit an undertaking that the information provided in the EIA/EMP Report and all other submission made to the Ministry in respect of this project are factually correct and PP & Consultant are fully accountable for the same.

The requirement of submission is after the issuance of O.M. No. 22-8/2018 IA.III (M) dated 20.04.2018. The PP applied under Form-II.

The proposal is a **brown field project** and requires verification in pursuant to Hon'ble Supreme Court order dated 02.08.2017 in the matter of Common Cause and S.O 804(E) dated 14.03.2017. In this regard information submitted by the PP was examined and it has observed that the production in year 1993-94 was 423805 Tone. However, the production was increased to 549770 Tone in year 2002-03 and at this stage PP was required to obtain EC under EIA notification 1994. But the PP obtained Environment clearance for 0.9 million tonne ore production and 1.2 million Tonne of ore beneficiation during 2009 vide Lr No. J-110015/380/2008-IA II (I) dated 04.11.2009. The PP further obtained the EC for expended capacity i.e. from 0.9 million TPA to 1.08 million TPA of ore production vide letter no. J-110015/380/2008-IA II (M) dated 26.07.2018 under clause 7 (ii) of EIA notification, 2006. Thus, there is a violation of Common Cause Order dated 02.08.2017 as PP was required to obtain EC on increase in production capacity. Further, the PP has exceeded the CTO limit for production of Zinc concentrate in the year 2002-03 [55573-54750=823 tonne]. Thus, it attracts violation of SC Order dated 02.08.2017. The PP has submitted an affidavit as per O.M. No. 3-50/2017.IA.III (Pt) dated 30.05.2018 to comply with all the Statutory Clearance and Common Cause Order dated 2.08.2017.

Compliance of Ministry vide O.M No 21-103/2015-IA.III dated 2.11.2018: This O.M. is related to terms of reference related to ground water withdrawal wherein it has mentioned that following ToR shall be invariably incorporated to address the issues while prescribing ToRs for various developmental projects: (a) *In the projects where ground water is proposed as water source, the project proponent shall apply to the Central Ground Water Authority (CGWA)/State Ground Water Authority(SGWA), as the case may be, for obtaining*

No Objection Certificate (NOC), if applicable, the MoEF&CC/SEAC may ensure that such application has been made. (b) Approval/permission of CGWA/SGWA shall be obtained before drawing ground water for the project activities. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.

Observation of EAC: In the instant case PP has already obtained NOC from CGWA vide LR No 21-4(315)/WR/CGWA/2008-1905 dated 16.11.2017 wherein the permission for dewater the accumulated ground water in mining pits @ 446.50 m³/day due to seepage and intersection of water table was provided. This NOC is valid for 3 years i.e. up to 15.11.2020.

Based on the discussion held and documents submitted by the PP during the meeting, the Committee **deferred** and EAC is of the view that proposal may be considered only after submission of the following requisite documents/clarifications:

- a) The Committee observed that there is a violation of Common Cause Order dated 02.08.2017 in the instant case for which affidavit was submitted by the PP. Based on this affidavit EC was granted to PP vide letter no. J-110015/380/2008-IA II (M) dated 26.07.2018 under clause 7 (ii) of EIA notification, 2006. In this EC letter there was specific condition wherein it has mentioned that PP shall comply with the direction of Hon'ble Apex Court dated 02.08.2017. There was also direction to State Government for not to allow mining operation till the PP pays the compensation for violation of Common Cause Order. In the ToR granted for the expansion project vide Lr. No. J-11015/84/2018-IA-II (M) dated 27.09.2018 it was explicitly mentioned that ToR shall not operational without complying with the Common Cause Order dated 02.08.2017. The PP submitted that they have approached State Government but till date no demand has been raised by the State Government of Rajasthan. The Committee asked the PP to submit the documents in support of the efforts made by HZL for payment of compensation of violation of Common Cause Order dated 02.08.2017. The Committee also asked the PP to first pay the penalty for violation of Common Cause Order dated 2.08.2017 and obtain NOC from the State Government before considering the proposal.
- b) The PP has mentioned that mineable reserved will be 30.94 million Tonne but the ore production proposed from 2019-20 to 2029-30 is 21.25 million tonne. There is a difference of 9.96 million tonne. Thus, PP needs to submit the flow chart clearly shows the material balance from initial excavation till final product & utilization/disposal of waste.
- c) PP has proposed to use waste for the construction of the tailing dam. The Committee also observed that tailing dam is mainly located outside the mining lease area. Thus, taking of Mineral/waste out of the mining lease would require payment of royalty to the State Government. The PP did not mention anything in this regards that what sort of permission would be required for use of waste for construction of tailing dam which is located outside the mining lease. In addition to this PP should also provide the

details of risk/hazards associated with tailing dam, protective/mitigative measure to be adopted, details about the leachate from the tailing dam etc.

- d) The PP also proposed additional area for the waste dumping thus PP should clearly show on the map area proposed for the dumping of the waste and protective measure to be adopted and how the dump will be stabilized.
- e) PP did not submit any documents regarding permission of CGWA for the period between 14.07.2011 till 15.11.2017. Further, it is not clear from Hydrogeological Studies that who are the experts involved in the preparation of the same. Report is not certified by any Scientists. The permission for dewatering is 446.50 m³/day but as per Hydrogeological studies PP is withdrawing 3145 m³/day. Thus, PP is required to submit the certified Hydrogeological Studies Report. In addition to this PP should submit a flow chart clearly showing the complete water balance.
- f) Both PP & Consultant should submit an undertaking that the information provided in the EIA/EMP Report and all other submission made to the Ministry in respect of this project are factually correct and PP & Consultant are fully accountable for the same.
- g) Committee observed that although PP has mentioned the recurring cost but they did not mentioned the amount for the same. PP has mentioned the employment figures but it's not clear whether it is direct or indirect employment. Thus, PP needs to provide the complete details of recurring cost and employment.
- h) The PP did not identify the occupational hazard and their mitigation measures. PP did not submit the budget for the Occupational Health Surveillance Plan. Thus a time bound, activity-wise budget for Occupational Health Surveillance Plan needs to be submitted. The Occupational Health Surveillance Plan should be prepared after perusing the Standard EC Condition recently formulated by the MoEF&CC. In addition to this PP needs to provide the details of concentration of lead & Zinc in the blood samples of the workers. The Committee also observed that PP has not provided any details regarding status and monitoring of the indoor air quality.
- i) The Committee also observed that being a underground mine PP needs to submit the detailed disaster management plan which clearly bring out the hazards/risk associated with mining operation, mitigative measures, roles & responsibilities of person engaged for the implementation of the same, budgetary provision, internal & external audits etc.
- j) The PP did not submit the activity-wise time bound action plan for the EMP so that the same can be monitored after grant of EC.

- k) The PP obtained the EC for expended capacity i.e. from 0.9 million TPA to 1.08 million TPA of ore production vide letter no. J-110015/380/2008-IA II (M) dated 26.07.2018 under clause 7 (ii) of EIA notification, 2006. But the compliance of this EC condition is not mentioned in the compliance report. The Committee is also of the view that PP should comply with all the minor violation reported by the Regional Office and implementation of the same needs to be submitted.
- l) The PP needs to submit the activity wise time bound action plan with budgetary provision for Corporate Environmental Responsibility (CER).
- m) The Committee observed that the PP has submitted the reply for the question raised during the PH. But many stakeholders submitted their written comments. Thus, PP needs to address all the issues raised during PH including the written comments. The PP needs to provide the details of commitment made during the public hearing and budget & timeline for the implementation of the same.
- n) The Committee observed that the PP did not submit the proof of submission of WCP to Chief Wildlife Warden and also the plan is only for five years but life of mine is more than 15 years. The Committee also asked the PP that how they will ensure that amount proposed for conservation plan will be spent in the activities proposed in Conservation Plan. The Committee finally asked the PP to submit Wildlife Conservation Plan duly approved by Chief Wildlife Warden and also monitoring mechanism for implementation of the same. The Conservation Plan should be prepared as per suggestion provided by the Committee members during the meeting.
- o) PP did not provide the details of plantation or area under green belt at the conceptual stage. Thus, PP needs to submit a map clearly showing the area to be covered under plantation (at an interval of 5 years till the life of mine) with latitude & longitude. It is also to be mentioned here that PP has not shown any increase in green belt area rather proposed for increasing the density of plantation. It has observed that within the mining lease area there is Govt. land and Charagha land on which can be used for development of green belt and afforestation. Thus, PP needs to demarcate the Govt. & Charagha Land on the Satellite Imaginary so as to ascertain the status of land use. In addition to this PP should provide the details of alternative land if any provided in lieu of Charagha Land.
- p) Committee observed that One season data was required to be collected as per ToR Point no 24 but in the instant case PP has collected Noise Level Data for only Month of April 2017 only. The Committee also observed that the air quality modeling is not carried for total excavation. Further, the modeling has been done for proposed expansion quantity. Thus, the Committee also desired that modeling should be done for both i) total excavation including the expansion and ii) only for expanded quantity as proposed by PP. The PP should ensure that modeling should be done for both the scenarios (worst & control case). Complete details of the input parameter & calculation used for modeling should be placed before the Committee. Further, the

EIA Report uploaded online and hard copy submitted is not same w.r.t to page number. Thus, PP needs to check the same.

(2.2). Nadidih Iron & Manganese Mine of M/s Feegrade & Co. (P) Ltd. for enhancement of production capacity of ROM Iron Ore from 2.88 million TPA to 6.0 million TPA and reduction in dry processing (crushing/screening) of low grade iron ore from old stack/dumps from 4.571 million TPA to 1.451 million TPA (Total handling 7.451 million TPA), located at villages Nadikasira & Rengalbeda, Tehsil-Koira, District-Sundargarh, Odisha (MLA 121.405ha)(F. No. J-11015/249/2016-IA.II(M); Proposal No. IA/OR/MIN/60756/2016)-(Consultant: M/s Ecomen Laboratories Pvt. Ltd.)-Consideration of EC

The proposal of M/s Feegrade & Co. Pvt. Ltd. is for Enhancement of production capacity of ROM Iron Ore from 2.88 million TPA to 6.0 million TPA and reduction in dry processing (Crushing/Screening) of low grade iron ore from old stack/dumps from 4.571 million TPA to 1.451 million TPA (Total handling 7.451 million TPA) of Nadidih Iron & Manganese Mine, Village -Nadikashira & Rengalbeda, Tehsil- Koira, Dist.- Sundargarh, Odisha (MLA 121.405 ha) bounded by Latitude: 21° 58' 20.15" N – 21° 57' 23.35" N, Longitude: 85° 14' 58.34" E – 85° 15' 34.84" E in Survey of India Toposheet no. 73 G/5 (F45N5).The PP also presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS. The highest and lowest contours within mining lease area are 615 m and 528 m respectively.

The proposal of TOR was earlier considered by the Expert Appraisal Committee in its meeting held during June 21-22, 2018 to determine the Terms of Reference (TOR) for undertaking detailed EIA study. The TOR was issued by the Ministry vide letter no. J-11015/249/2016-IA.II (M) dated 31st July, 2018. The Proponent submitted the EIA/EMP Report online to Ministry for seeking environmental clearance.

The total mine lease area of 121.405 ha comprises 89.87 ha of forest land and 31.535 ha of non-forest land. Stage-II Forest Clearance for an area of 39.309 ha has been accorded by MoEF&CC, Govt. of India vide letter no. 8 (21)26/2003-FCE, dated 16.03.2006. Further Stage-II Forest Clearance for 45.118 ha of additional forest & deemed (DLC) forest land for mining and allied activities (including 8.036 ha. of forest land for safety zone) has been accorded vide F. No. 8-68/2011-FC dt. 30/10/2013 by MoEF&CC (Total forest area diverted = 84.427 ha). The lessee has applied for surrender of remaining 5.443 ha forest land which is under process with State Govt. Project Proponent reported that the mine is in operation since January 1961. In pursuance to section 8-A (6) of MMDR Amendment Act, 2015, the mining lease period has been extended up to 31/03/2020 by execution of a Supplementary Lease Deed on 02.05.2015 over an area of 121.405 ha.

The mine was accorded Environmental Clearance vide Ministry's letter no. J-11015/136/2012-IA.II (M) dated 10.04.2015 for 2.88 million TPA ROM and dry processing

of 4.571 million TPA of low grade iron ore by reworking of old dumps thus total handling of 7.451 million TPA and installation of wet beneficiation plant of 1.142 million TPA capacity and production of 0.0036 million TPA of Manganese ore. Further, the Installation of wet beneficiation plant of 1.142 million TPA capacity has been deleted through amendment of above EC order by Ministry of Environment, Forests and Climate Change on request of Project Proponent vide letter no. J-11015/136/2012-IA.II (M) dated 09.11.2015. Total handling of Iron ore will 7.451 million TPA to get 5.90 million TPA of processed (screened & crushed) iron ore. The total handling (2019-20) from pit excavation and dump handling will be 8183444 metric tonnes (ROM ore: 6.0 MT + dump handling for low grade ore production: 1.451 MT + excavation of OB/SB/IB : 0.732444 MT).

The PP reported that the approval of modification of the Mining plan has been given by Indian Bureau of Mines, vide letter no. MPM/FM/24-ORI/BHU/2016-17/7405, dated 30.12.2016, is valid up to 31/3/2020 for the target production of 6.0 million TPA of ROM iron ore and reduction in dry processing (Crushing/Screening) of low grade iron ore from old stack/dumps from 4.571 million TPA to 1.451 million TPA (Total handling 7.451 million TPA). PP reported that the breakup of land use category at present is: Area excavated (42.7 ha), Over burden/ dump (20.394 ha), Mineral Storage (7.421 ha), Infrastructure (1.783 ha), Roads (5.246 ha), Green belt & Plantation (7.54 ha), Mineral processing plant (3.75 ha), Mine camp (1.522 ha), unutilized (25.606 ha) & non mineralized forest area applied for surrender (5.433 ha). The proposed land use shall be mining (58.613 ha), Overburden/Dumps: (27.889 ha), Mineral Storage: (7.421 ha.), Infrastructure: (2.137 ha), Roads: (4.246 ha), Green Belt & Plantation: (12.134 ha), Mineral processing Plant: (2.0 ha), Mine camp: (1.522 ha) & non mineralized forest area applied for surrender: (5.433 ha).

Project Proponent reported that the method of mining will be fully mechanized. The conventional opencast mining with mechanized drilling with 110 mm dia drill machine, deep hole blasting, excavation by excavator of capacity up to 2.6 m³ bucket capacity and stacking by loader of capacity upto 1.2 m³. Excavator of capacity up to 1.6m³ will be used for feeding the crushing & screening units. ROM iron ore will be processed through dry crushing & screening units. To prevent generation of fugitive dust during transportation of ore through trucks/dumpers, static water sprinklers have been installed along the haul road within the mine for a length of 5.04 km. Besides that water is also being sprinkled in dust prone areas through water tankers. The ROM ore from Nadidih Iron & Manganese Mines will be hauled through trucks/dumpers to dry processing units. After processing, the finished iron ore will be transported by dumpers to the Railway siding and loaded into Rail wagons and dispatched mainly to the steel, pelletisation, sponge & sinter plants within the country and also to port for export. At present, the production of the mine is from excavation of Iron ore (ROM) from the mine followed by dry screening & crushing of iron ore. The accumulated rejects, overburden/waste material will be transported through dumpers to the earmarked place. Project proponent has informed that at present mining operation is at an RL of 533 m which is proposed to touch RL of 501m up to the plan period of 2018-19 for the targeted production and at an RL of 470 m up to plan period 2019-20. As the ground water table is at an RL of 488m, the mine working will intersect the ground

water table in 2019-20. A detailed "Hydro Geological Study" has been prepared by IIT (ISM) Dhanbad which has been submitted to the Ministry. The Committee deliberated the same. PP has informed that online application has been submitted to CGWA on 22.11.2018 for issue of NOC to abstract ground water. The PP has also informed that the CGWB, Bhubaneswar has already recommended and forwarded the application to CGWA, New Delhi which is under consideration for approval. To improve the air quality regular sprinkling of water by both water tankers and static water sprinkling arrangement is being done. Crushing and screening units are fitted with dry fog system. Regular environmental monitoring is being carried out to improve the environmental quality. Vehicles as well as heavy machineries are regularly monitored and their emission conform prescribed limit. PP reported that presently they have the permission from Dept. of Water Resources (DOWR), Govt. of Odisha for drawl of 520 KLD (15600 KL per month) of surface water from Karo Nadi and 175 KLD (5250 KL per month) of ground water (only for drinking and domestic use) to cater the present demand of the project. Total water requirement of the project after expansion will be 993.5KLD (226KLD ground water for drinking & domestic use and 767.5KLD surface water for environmental maintenance). The PP has the NOC from CGWA for withdrawal of 226 KLD of ground water. At present the direct employment is 346 nos. This will increase to 426 nos. after expansion an indirect employment of 466 people as contract jobs, which will mainly be extended to the local people. So, 892 people will get engagement.

PP reported that at the end of the plan period i.e.; 2019-20 approximately 12.134 hectares of area will cover green belt and plantation. At the end of lease period (31.03.2020) of the mine approximately 3.5 hectare of exhausted quarry will be back filled and covered with plantation. The social infrastructure adjacent to the project area includes a health centre and one Primary School. As a part of CSR activities the Company has undertaken the construction works of School buildings, boundary wall for Schools, club houses in villages, digging of ponds in nearby villages and bore wells. Such type of work will continue in future. The entire infrastructure related facilities for traffic and transportation of material in/from the mine are already available.

Project Proponent reported that there are two Legal cases in this instant proposal. (i) 2(C) C 51/2013 has been filed in the court of SDJM, Bonai, Sundargarh for violation of Sec.15 of the Environment (Protection) Act, 1986. The said case has been stayed on 28.01.2014 by the Hon'ble High Court of Orissa in CRLMP NO. 47/2014 in Misc. Case No. 25/2014. and (ii) Revision Application bearing No. 22/ (67)/2012/RC-I has been filed by the lessee before the Mines Tribunal, Ministry of Mines, Govt. of India, New Delhi against the demand notice dated 20.10.2012 U/s 21(5) of the MMDR Act, 1957, which has been disposed of by the Mines Tribunal, Ministry of Mines, Govt. of India, New Delhi on 16.08.2017.

Project Proponent reported that there is no National Park, Wildlife Sanctuaries, Biosphere Reserve, Wildlife Corridor, Tiger/Elephant Reserve etc. within the 10 km radius of mining lease area. The Mendhamaruni, Karo, Kathmal, Lakraghat, Karampada and Uliburu Reserve Forest are located within a radius of 10 km from the core zone of the

mine lease area. The Karo river is flowing in the buffer zone adjacent to the mine along western boundary and Suna River is flowing at a distance of 5.3 km south east from the mine lease boundary.

Project Proponent reported that the baseline data have been carried out during summer season (March to May 2018). PP submitted that the ambient air quality data for PM10, PM2.5, SO2 and NO2 were studied at 8 locations. From the study it is seen that, in the ambient air, the PM10 values were in the range from 50.48 to 85.5 $\mu\text{g}/\text{m}^3$, PM2.5 values were in the range of 26.81 to 56.53 $\mu\text{g}/\text{m}^3$, SO2 levels were ranging from 6.54 to 16.76 $\mu\text{g}/\text{m}^3$ and NO2 levels were ranging from 10.41 to 24.17 $\mu\text{g}/\text{m}^3$. The predicted incremental concentration for PM10 is NIL to 2.53122 $\mu\text{g}/\text{m}^3$, for PM2.5 the incremental concentration is from NIL to 0.99308 $\mu\text{g}/\text{m}^3$, for NO2 the incremental concentration is from NIL to 0.02277 $\mu\text{g}/\text{m}^3$.

The Public Hearing was conducted by State Pollution Control Board on 25.10.2018 at playground near Nadidih Primary School of Village, Nadikasira under Koira tehsil of Sundargarh District. The Public Hearing was chaired by the Shri Bhaskar Chandra Turuk, Additional District Magistrate, Sundargarh. About 500 participants had attended the public hearing and 172 persons have put their signature in the attendance sheet. 38 persons took part in the deliberation. In total, 8 written statements have been received from various stake holders. The Main issues raised during PH were Construction of a bridge over Karo river, Provision of transformer for Koira stadium, Provision of DG sets for Nadidih, Nadikasira & Rengalbada villages for uninterrupted power supply, Street lighting in Rengalbada village, Construction of club house at Kendudih village, Drainage facility at Nadikasira village, Financial assistance to the SHG's, Infrastructure facility for the SHG for mushroom cultivation, maintenance of the transportation road, water sprinkling over transportation road, Black-top/concreting of the approach road from Rengalbada NH to mines along with drainage facilities to control fugitive dust emission during plying of transporting vehicles, enhancement of financial assistance to the private teachers, construction of boundary wall around Rengalbada school premises, supply of sporting materials & school bus facility, maximum employment to local public, Income generation and development of the area, Deployment of truck/tippers of local villagers on priority, Drinking water facility having bore well with overhead Sintex tank at Guali, Plantation of fruit bearing trees in the degraded Govt. land etc. Project proponent has agreed to construct the bridge within 18 months after approval from Forest Department/competent authority for which Rs. 60/- lakhs will be spent, Rs 5/- lacs will be spent on provision of transformer in Koira stadium, employment of local people has already been given as per their eligibility, for providing further drinking water facility project proponent will spend Rs. 7.0 lakhs on this account, project proponent will expense, project proponent is already using wet drilling and rock breakers to avoid blasting, static sprinkler system has already been installed, retaining wall, garland drain, settling tanks already exist in the mine and regular plantation is being carried out in the mine. Capital cost already made on environment is Rs 7.61 crores & proposed to incur Rs 0.37 crores up to 31/3/2020. On peripheral development total expenses incurred during 2014-15 to 2017-18 is Rs 14.02 crores & proposed expenditure /annum Rs 0.77 crores.

The MoEF&CC Regional Office Bhubaneswar, vide letter no. 101-872/EPE/13, dated 18.06.2018, has submitted the certified compliance report of earlier EC no. J-11015/136/2012-IA. II (M), dated 10.04.2015. The Committee has deliberated the point wise compliance of Environmental Clearance. The report inter- alia mentioned that the project authority has complied or are in process of complying with the conditions stipulated by the Ministry. The PP was requested to submit action plan to increase greenbelt area by plantation more trees and cleaning of all rain water harvesting structure before and after monsoon. PP has informed that they have submitted the compliance report/action plan to RO, MoEFCC vide letter no. FEE/ED/GEO/2018-19/165 dated 30.06.2018.

The Committee noted that the Ministry of Mines, vide Notification No.S.O.2817 (E) dated 22nd November, 2010 had appointed a Commission of Inquiry consisting Justice M.B. Shah, retired Judge of the Supreme Court of India, for the purpose of making an inquiry in to mining of iron ore and manganese ore in contravention of the provision of various Statues and the rules and regulations issued there under, in various States including the State of Odisha. In view of Justice Shah Commission report (2013), the Ministry of Environment, Forest and Climate Change (MoEF&CC) has entrusted the work to CSIR-NEERI to conduct a Carrying Capacity Study. In this context, CSIR-NEERI conducted the study encompassing collection of primary data for various environmental components (viz. air, noise, water, soil/land, biological and socio-economic aspects), collection and analysis of environmental quality data by different mines in the region, modeling for transport scenario and infrastructure need assessment, and meetings/workshops with different stakeholders. NEERI has submitted the report along with the recommendations. The PP has made the point-wise presentation w.r.t. the recommendations of CSIR-NEERI report on carrying capacity study may be included in the TOR condition w.r.t. mining proposal of Iron Ore and/or manganese in the State of Odisha. There are a recommendation which needs to be implemented by the State Govt. and Project Proponent.

Project proponent has informed that the mine is presently under operation by complying all the conditions of CTE/CTO stipulated by SPCB, Odisha. Indian Bureau of Mines is also monitoring the compliance of all the conditions given in MP & PMCP. Project proponent has submitted that this mine is a non-captive mine having validity of lease period upto 31.03.2020. The ore produced from the mine is dispatched to different consumer industries through different public Railway sidings. The public Railway sidings are located at a far distance, the nearest being Barsuan at a distance of 38 km from the mine. It is not feasible to construct conveyor belt system for transport of iron ore from the mine to different Railway sidings due to problem in acquisition of private land (including ST land), involvement of forest land, involvement of huge expenditures on this account as well as less availability of time since the mining lease period is valid upto 31.03.2020 only. PP informed that Mine Management will make necessary arrangement to arrest "zero dust re-suspension" within three months. For this purpose, the PP is in the process of procuring a mobile road vacuum cleaner/sweeper shortly. PP informed that truck parking facility already exists within the mine. PP has requested State Govt. to create common parking plaza for transporting vehicles for cluster of mines through DMF fund.

The estimated project cost is Rs. 200 Crores. PP has earmarked Rs. 37 Lakhs as capital cost for environment management plan, Rs. 77.34 Lakhs for peripheral activities per annum and Rs. 37.7 Lakhs per annum for environment management plan.

The Committee noted that the Consultant has not prepared the EIA/EMP report as per Appendix III (Generic Structure of Environmental Impact Assessment Document) of EIA Notification, 2006. The report should contain 12 chapters whereas PP has submitted only 10 Chapters in the EIA/EMP Report. In this context Consultant needs to revise the EIA EMP report as per Appendix III of EIA Notification, 2006 and resubmit the same before EAC.

The Committee, after detailed deliberations, **deferred** the proposal and sought the following requisite information/clarification: -

- (i) The Committee observed that the mine lease is valid only upto 31.03.2020 and the PP has proposed the Expansion of production capacity of ROM Iron Ore from 2.88 million TPA to 6.0 million TPA and reduction in dry processing (Crushing/Screening) of low grade iron ore from old stack/dumps from 4.571 million TPA to 1.451 million TPA (Total handling 7.451 million TPA). The Committee observed that the time for expiry of the mining lease is very less and PP needs to submit the time required for achieving the peak production after obtaining clearance from the Ministry because there are other statutory clearances such as CTO etc. needs to be obtained before mining for the expanded capacity. In addition to this PP needs to submit the month wise production plan (eg. Month 1, Month 2....) for proposed production capacity of Ore.
- (ii) The Committee noted that the Consultant has not prepared the EIA/EMP report as per Appendix III (Generic Structure of Environmental Impact Assessment Document) of EIA Notification, 2006. The report should contain 12 chapters whereas PP has submitted only 10 Chapters in the EIA/EMP Report. In this context Consultant/ PP needs to revise the EIA EMP report as per Appendix III of EIA Notification, 2006 and resubmit the same before EAC.
- (iii) Project Proponent reported that the baseline data have been carried out during summer season (March to May 2018). PP has not predicted the incremental concentration for SO₂ parameter. The Committee is of the view that the proposed production of mine is almost twice; however, the predicted incremental concentration for the parameters are very less and suggested that PP needs to re-calculate the prediction for all the parameters including SO₂ and submit before the EAC for further deliberations. In view of the above PP needs to redo the modeling and submit the details with inputs on Air Quality modelling along with incremental ground level concentration due to mining and allied activities along with ore transportation on account of additional vehicles. The PP needs to submit the dust emission control strategies and its emission rate.

- (iv) The Committee observed that as per the recommendations of NEERI report the State Government has to complete the SOTM within 5 years and as the EC capacity is >5 Million TPA, therefore, SOTM 1 may be applicable to this project and the Ore transport mode should be 100% by private railway siding or conveyor belt up to public railway siding or pipeline for captive mines and 70 % for non-captive mines. In this context PP submitted that It is not feasible to construct conveyor belt system for transport of iron ore from the mine to different Railway sidings due to problem in acquisition of private (including ST land), involvement of forest land, involvement of huge expenditures on this account as well as less availability of time since the mining lease period is valid upto 31.03.2020 only. The Committee asks the PP to submit the development on the SOTM, if any, made by the Government of Odisha.
- (v) The PP needs to implement the recommendations of the report of carrying capacity study and necessary arrangement to be made to arrest "zero dust re-suspension".
- (vi) The Committee observed that as per the recommendations of NEERI report and its TOR condition no. 6, the PP needs to construct cement concrete road from mine entrance and exit to the main road with proper drainage system and green belt development within one year. PP informed that they will construct cement concrete road from mine entrance and exit to the main road NH 215 covering a length of 1.227 km with drainage system and green belt within one year with an estimated cost of 2.88 crores. The road covers an area of 1.474 ha comprising of 0.73 ha of forest land, 0.744 ha of non forest government and private land. After necessary permission/acquisition of land, the road construction will start expected to be completed by January, 2020. The Committee deliberated the issues and is of the view that PP needs to complete the recommendations of the carrying capacity study report by July 2019 and accordingly revised action plan on the recommendations needs to be submitted.
- (vii) PP needs to submit the details of financial Assurance in the form Bank Guarantee during approval of Review of the Mining Plan for implementation of FMCP under Rule-24 of Mineral Conservation and Development Rules, 2017.
- (viii) The report inter-alia includes the presence of schedule species. PP needs to submit the species specific conservation plan for Schedule-I species along with the budgetary provisions. Copy of approval of Conservation Plan or proof for submission needs to be submitted.
- (ix) The PP needs to submit how they will reduce the water consumption over the years. Target for rain-water harvesting and reduction in water use needs to be explored and submitted.
- (x) PP needs to submit the details of the activities and budget earmarked for Corporate Environmental Responsibility (CER) which shall be as per Ministry's O.M No 22-

65/2017-IA. II (M) dated 01.05.2018 and its action plan on the activities proposed under CER.

- (xi) PP needs to resubmit the action plans on the recommendations of the report of carrying capacity study.

(2.3). Badampahar Iron Ore Mine of M/s Lal Trades & Agencies Pvt. Ltd. for enhancement of Iron Ore from 0.72 Million TPA to 1.5 Million TPA (ROM), located at villages of Dhangurimuta, Dudhijharan and Badampahar RF, Tehsil Kusumi, District Mayurbhanj, Odisha (MLA 129.610 ha; Proposal No. IA/OR/MIN/73392/2018) (Consultant: Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar)-Consideration of EC

The Proposal of M/s Lal Trades & Agencies Pvt. Ltd. is for enhancement of Iron Ore from 0.72 Million TPA to 1.5 Million TPA (ROM). The mine is located at villages of Dhangurimuta, Dudhijharan and Badampahar RF, Tehsil Kusumi, District Mayurbhanj, Odisha in the MLA of 129.610 ha. The lease area fall in Latitude: 22°03'52.87"-22°05'09.53" North, Longitude: 86°06'33.81" - 86°08'24.81" East and covered in Survey of India Topo Sheet No. 73J/4. The area is marked by undulating hills with altitudes varying from 395m to 830m above MSL. General slope of the area is towards north. Badampahar, the nearest railway siding, is located at a distance of 0.4 km from the lease area. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The proposal of TOR was earlier considered by the Expert Appraisal Committee in its meeting held during May 14-15, 2018 to determine the Terms of Reference (TOR) for undertaking detailed EIA study. The TOR was issued by the Ministry vide letter no. J-11015/39/2018-IA.II (M) dated 20th July, 2018. The Proponent submitted the EIA/EMP Report online to Ministry for seeking environmental clearance.

Project Proponent reported that the total lease area is 129.610 Ha. Out of total area 129.610 ha, 117.840 ha is forest land, 10.990 ha is safety zone area and rest 0.780 ha is non-forest land comprising Government land and Private land. Forest clearance for 117.840 ha has already been obtained by the MoEF&CC vide letter F.No.8-11/2004-FC, dated 14th June 2007 and 27th July 2009 excluding the safety zone forest area of 10.990 Ha. The Environmental Clearance has obtained from the Ministry for production of Iron ore 0.72 Million TPA vide letter. no. J-11015/1180/2007-IA.II (M), dated 09-04-2010. CTO was also obtained with validity up to 31-03-2020. The supplementary lease deed was executed on 20th December, 2016 as per the Amended MMDR Act, 2015 and the Lease validity is up to 26th May 2020.

Project Proponent reported that the Modified Mining Plan was approved by IBM vide letter No-MPM/FM/16-ORI/BHU/2018-19, dated 26.07.2018 for expansion of Iron Ore Production from 0.72 MTPA to 1.5 MTPA. Approval of Final Mine Closure Plan has been obtained from IBM vide letter No-FMCP/FM/28-ORI/BHU/2018-19, dated 27.09.2018 under Rule-24 of Mineral Conservation and Development Rules, 2017. The lessee has paid Rs.

3,02,21,950/- (Rupees Three Crores two lakhs twenty one thousand nine hundred fifty) as financial Assurance in the form Bank Guarantee during approval of Review of the Mining Plan for implementation of FMCP. NOC of CGWA for intersection of ground water table and drawn of 300 cum/day of water has been obtained from CGWA, vide NOC No. 21-4(193)/CGWA/SER2009-1200, dated 08.12.2009.

Project proponent reported that the mining operations will be through semi mechanized opencast mining system, involving shovel-dumper combinations, deep hole drilling and blasting. The total water requirement will be 132 m³/day for mining, green belt, dust-suppression and drinking water purposes. The water required will be sourced from the bore well and mine pit water. Permission for 300 m³/day of ground water has already been obtained. The power demands for the mine are 212 KVA. The power requirement will be met from the NESCO Utility and backup power from DG Sets. All required amenities / facilities required for the mining activities like site office, rest shelter, Canteen etc., are available at the site. These facilities will be suitably upgraded for the expansion. The proposed mine expansion is expected to generate about 775 number of direct and 1300 number of indirect employment. The total project cost for the mine expansion for plant and machinery and pre- operative expenses are expected to be Rs. 35.5 crores.

Project Proponent reported that the total geological resource as on 01.07.2018 for iron is 8.29 million tonnes and the mineable reserve is 8.29 million tones. There will be about 4,86,900 m³ of waste from mines is to be likely generated during 2018-19 to 2020-21. The PP has reported the following details of total excavation, ROM and corresponding production of iron ore, OB/IB and mineral rejects as per the modification of Mining Plan approved by the IBM vide dated 26.07.2018:

Year	Total Excavation (m ³)	Top soil (m ³)	Over Burden / Inter Burden (m ³)	Total Ore (Saleable + Rejects)	
				Ore (m ³)	Ore (MT) Ore in m ³ x 2.6
2018-19	7,76,000	-	2,09,400	5,66,600	14,73,160
2019-20	8,40,100	-	2,65,200	5,74,900	14,94,740
2020-21	89,700	-	12,300	77,400	2,01,240
Total	17,05,800	-	4,86,900	12,18,900	31,69,140
Average Bulk density-2.6 MT/m ³					

Project Proponent reported that existing depth of working is up to RL 830 m in Iron zone. Ultimate depth of working will be 395m RL. The ground water table occurs at a depth of 45 m (350mRL) to 90m (at 305m RL) There is no Intersection of ground water table is expected in the conceptual stage for iron ore quarry. Necessary clearance from CGWA is already been granted. The life of the iron ore mine is estimated to be 6 years. An area of

70.696 hectares land is already degraded / utilized for mining, dumping, office, road, green belt etc. An area of 7.18 hectares is anticipated to be degraded / utilized at the end of the conceptual planning period. In the post mining stage out of 77.876 ha of mined out area, Reclamation of 73.766 (back-filling & plantation).

Project Proponent reported that the Similipal National Park is located at about 6.1 km from the mine lease area. PP has obtained the NBWL Clearance vide letter no. 3250/1WL—SSP-108/2016 dated 26.04.2016. Elephant is placed under Schedule-I as per Wild Life (Protection) Act, 1972 is found in the Study area, for which Site-Specific Wild life conservation plan was prepared and got approved from PCCF (Wildlife) & Chief Wildlife Warden, Odisha. The PP also presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS. The Committee deliberated the issues.

Project Proponent reported that the baseline data have been carried out during Summer Season (March 2018 – May 2018). PP submitted that the ambient air quality data for PM₁₀, PM_{2.5}, SO₂, NO₂ and CO were studied at 8 locations. From the study it is seen that, in the ambient air, the PM₁₀ values were in the range of 53.97 to 74.32µg/m³. PM_{2.5} values were in the range of 34.79 to 50.72µg/m³. SO₂ levels were ranging from 6.82 to 11.22µg/m³. NO₂ levels were ranging from 11.19 to 15.0 µg/m³. The CO values in the all locations found to be below detectable limit (DL – 1144 µg/m³). PP submitted that, 4 Ground water and 6 surface water samples were collected. The pH values of 4 bore well water samples were ranging in between 6.96 – 7.12. TDS values were in the range of 178.0-432.0 mg/L. Chloride values were ranging from 22.4-129.95 mg/L. Iron content was found to be in the range 0.18 – 0.36 mg/L. The pH values of 6 Surface water samples were ranging in between 6.8-7.4. TDS values were in the range of 104.0-124.0 mg/L. Chloride value was 12.0mg/L. Iron content was found to be 0.21-0.29mg/l. PP submitted that the presently they are adopting best environmental practice towards management of Air, water, Noise, Surface run-off etc. and same will extend after the expansion. Effective Rain Water Harvesting (RWH) systems are already implemented and methods such as RWH from roof tops of buildings, Storm water drainage system along the roads, staggered trenches, RWH from the valley, recharge wells etc., are being and will be implemented. PP submitted that, traffic study has been carried out and the existing road & railway network is adequate enough for expansion.

The Public Hearing was conducted by State Pollution Control Board on 10.10.2018 at Badampahar, under Kusumi tehsil of Mayurbhanj District. The Public Hearing was chaired by the Shri B. B. Bhol, Additional District Magistrate, Mayurbhanj. About 600 participants had attended the public hearing meeting and put their signature in the attendance sheet. 50 persons took part in the deliberation. The major points raised by the public are environmental pollution & its control, drinking water facility & sanitation, education facility, lively hood generation, peripheral development, health care etc. The lessee has submitted the detail point wise compliance with budgetary provision and time bound action plan. The Committee deliberated the issues raised during the PH and its action plan and is of the view that the action plan is adequate and PP shall complete all the tasks as provided in the action plan in time.

The MoEF&CC Regional Office Bhubaneswar, vide letter no. 101-463/16/EPE/306, dated 19.09.2018, has submitted the certified compliance report of earlier EC no. J-11015/1180/2007-IA.II (M), dated 09.04.2010. The Committee has deliberated the point wise compliance of earlier Environmental Clearance. The report inter-alia, mentioned that the project authority has complied or are in process of complying with the conditions stipulated by the Ministry. The Regional Office in its report inter-alia mentioned the measures to conservation of rain water harvesting, installation of STP, final mine closure plan, Environmental Management Cell etc. In this context, PP vide letter dated 20.12.2018 has submitted the compliances on the issues raised by the RO. PP inter-alia mentioned that (i) They have consulted the CGWB, Bhubneswar for implementations of suitable conservation measures on rain water harvesting, (ii) 20 KLD STP for treatment of domestic waste water has been constructed, (iii) Final Mine Closure Plan has been approved by IBM vide letter No-FMCP/FM/28-ORI/BHU/2018-19, dated 27.09.2018 under Rule-24 of Mineral Conservation and Development Rules, 2017, and (iv) Six monthly compliance reports uploaded on PP's website. The Committee deliberated the compliance report and is of the view that the compliances is adequate.

The Committee noted that the Ministry of Mines, vide Notification No.S.O.2817 (E) dated 22nd November, 2010 had appointed a Commission of Inquiry consisting Justice M.B. Shah, retired Judge of the Supreme Court of India, for the purpose of making an inquiry in to mining of iron ore and manganese ore in contravention of the provision of various Statues and the rules and regulations issued there under, in various States including the State of Odisha. In view of Justice Shah Commission report (2013), the Ministry of Environment, Forest and Climate Change (MoEF&CC) has entrusted the work to CSIR-NEERI to conduct a Carrying Capacity Study. In this context, CSIR-NEERI conducted the study encompassing collection of primary data for various environmental components (viz. air, noise, water, soil/land, biological and socio-economic aspects), collection and analysis of environmental quality data by different mines in the region, modeling for transport scenario and infrastructure need assessment, and meetings/workshops with different stakeholders. NEERI has submitted the report along with the recommendations.

The PP has made the point-wise presentation w.r.t. the recommendations of CSIR-NEERI report on carrying capacity study may be included in the TOR condition w.r.t. mining proposal of Iron Ore and/or manganese in the State of Odisha. There are recommendations which need to be implemented by the State Govt. and Project Proponent. PP informed that since 3 years Dept. of Steel & Mines, Govt. Odisha fixing the annual production capacity of each mine both in Joda & Koira sector considering different limiting factors like requirement, environment, infrastructure etc., in coming years they will abide by the sustainable production limit of State Govt., They are operating the mines with strict compliance to monitoring of environmental quality parameters as per EC and CTE/CTO., PP informed that, they will abide the State Govt. decision towards production from mine in line to commensurate infrastructure improvement (viz. SOTM, pollution free road transport, enhancement of rail network etc.). The road is being constructed as per the IRC guidelines. Again the Lessee has constructed 1.5 Km Pucca Road which is connected to the transporting road. Beside this they have provision to make proper drainage system with fencing & plantation the stretch of the road passes within the lease area. Also they have made cement

concrete road from the exit gate to inside the lease area. PP stated that, they will abide by the SOTM system as and when guideline formed by the Department of Steel & Mines, Govt. of Odisha. PP stated that Collector Mayurbhanj called a meeting on 10.12.2018 to discuss with all lessees regarding safe transportation and prevention of pollution of minerals during transportation from mining area to main road and railway sidings. PP submitted that they have already made parking area inside the mine lease with Rest room & toilet facility. Sweeping on the mineral transport road is presently under practice by Lessee. Further, vacuum cleaning will be adopted with permission from Authorities. 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.

PP submitted that, the details of the past production figure from 1993-94 till current year duly authenticated by Mining Officer, Baripada is obtained. In pursuance to the judgement of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Others, the MO, Baripada has raised the demand notices no. 3428/Mines Dated 13.12.2017 and 2968 Dated 09.11.2017 and the project proponent has made the payment as demand raised based on the Hon'ble Supreme Court order with an amount of INR 91,17,65,540.00 vide online Treasury Challan Ref. No. 27DDFEAE7D dated 28.12.2017 and INR 2,87,746.00 vide online Treasury Challan Ref. 27DE0DFE75 Dated 29.12.2017. The mine is working in compliance of the Common Cause judgment dated 02.08.2017. The Committee noted that PP has not enhanced the production capacity of Iron Ore after grant of EC on 09.04.2010 and mined out within consented capacity. The PP vide letter dated 16.06.2018 has also submitted the affidavit as per the Ministry's OM dated 30.05.2018 in pursuance to the judgement of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Others.

PP submitted that they have carried out various CSR activities in the region. So far, M/s Lal Trades & Agencies Pvt. Ltd. has spent more than Rs. 112.596 lakhs for various CSR program between 2016-17 & 2017-18. PP will also ensure that the planned CSR activities are effectively implemented through a monitoring team who can also discuss with the locals and get their feedback for future planning and improvement. Apart from CSR, M/s Lal Trades & Agencies Pvt. Ltd. will contribute substantially to the overall economy and social development of the area through Enterprise Social Commitment (ESC)/ Corporate Environmental Responsibility (CER) activities. PP submitted that a financial provision of Rs. 290 lakhs are made for various environmental control measures proposed under capital cost and recurring cost of Rs. 17.25 lakhs per year. Total project cost is Rs. 35.5 Crores.

The Committee deliberated the proposal and based on the information submitted by PP, the Committee **recommended** the Proposal for grant of Environmental Clearance for enhancement of Iron Ore from 0.72 Million TPA to 1.5 Million TPA (ROM) along with Standard EC conditions as per **Annexure-III**.

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 recommendations which need to be implemented by the State Govt. of Odisha and Project Proponent. Based on detailed

deliberations on the recommendations of the carrying capacity study report, the Committee has also **recommended the following specific conditions viz.**

- 1) 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.
- 2) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.
- 3) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.
- 4) 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.
- 5) 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.
- 6) 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.

- 7) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.
- 8) 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.
- 9) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.
- 10) 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.
- 11) 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.
- 12) 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.

- 13) 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.
- 14) **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.
- 15) **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.

16) **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.

17) **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.

18) **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.

19) **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.

- 20) **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 outees 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.
- 21) **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.

- 22) **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).

(2.4). Baranda Laterite Mine of M/s UltraTech Cement Ltd. with enhancement in Production Capacity of Laterite from 36,000 TPA to 2,50,000 TPA (ROM), located at Village-Baranda, Taluka-Lakhpat, District –Kachchh, Gujarat (ML Area: 400 ha)–(File No. J-11015/19/2015-IA-II(M); Proposal No. IA/GJ/MIN/26384/2015)(Consultant: JM Enviro Net Pvt. Ltd.)- Re-Consideration for EC

The proposal is of M/s. UltraTech Cement Ltd. is for Baranda Laterite Mining project (M.L. Area – 400 ha) with Enhancement in Production Capacity of Laterite from 36,000 TPA to 2,50,000 TPA (ROM). The mine lease is located at Village Baranda, Taluka Lakhpat, District Kachchh, Gujarat. Study area falls within the Survey India of Toposheet No. 41A/10 (Restricted). The Project is located in Seismic zone-V. The Latitude and Longitude of the site falls between 23° 31' 42.20" N to 23° 32' 42.40" N and 68° 39' 12.60" E to 68° 41' 47.81" E respectively. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The proposal of EC was earlier considered by the Expert Appraisal Committee in its meeting held during **March 20-21, 2017** wherein the Committee, after detailed deliberations, **deferred** the proposal and sought the following requisite information: -

- (i). A certificate from the State Forest Department certifying that the mine lease area does not fall in the ESZ of Narayan Sarovar Wildlife Sanctuary
- (ii). A list of scheduled wildlife species authenticated by the State Forest Department.
- (iii). Proof of submission of the conservation plan to the Chief Wildlife Warden
- (iv). Specific R&R plan with the budget allocation for each specific activity mentioned in the plan.
- (v). The detailed breakup for Rs. 7.23 crores mentioned in the CSR activities specific to this project.
- (vi). Quantitative plan for the issues raised during public hearing and the implementation plan with timeframe and budget.
- (vii). The reason for non-compliance of EC specific condition XV on augmentation of groundwater.

In this context, the Project Proponent has submitted the information and accordingly the proposal was reconsidered in this present meeting. The details deliberations are as below:

- (i). PP reported that a Letter has been received from Chief Wildlife Warden vide letter No WLP/32/C/156 - 157/ 2018 - 19 dated 07.07.2018 which clearly states that " The Mining Lease area does not fall in the declared Eco Sensitive Zone of Narayan Sarovar Sanctuary.
- (ii). A list of scheduled wildlife species authenticated by the State Forest Department. A list of scheduled wildlife species has been approved from Chief Wildlife Warden vide letter No WLP/32/C/156 - 157/ 2018 - 19 dated 07.07.2018 was submitted. Conservation Plan along with budgetary allocation of Rs. 2.27 Crores/- has been prepared for conservation of wildlife in consultation with State Forest and Wildlife Department and same has been approved from Chief Wildlife Warden vide their letter No WLP/32/C/156 - 157/ 2018 - 19 dated 07.07.2018. The Committee deliberated the plan.
- (iii). With respect to specific R&R plan, PP submitted that Total mining lease area is 400 ha which is Government land. No private land is involved in mining lease area.
- (iv). With respect to detailed breakup for Rs. 7.23 Crores mentioned in the CSR activities specific to this project. The PP has reported that the amount of Rs. 7.23 Crores (For CSR) is for all the mines and plant of Sewagram Cement Works. Rs. 1.20 Crores is the allocated amount for this project, which will be spent in the nearby areas for the next 5 years towards Corporate Environment Responsibility (CER). As per MoEFCC Office Memorandum dated 01.05.2018; as the project involves the Capital Investment of 5.0 crore, so it falls under the category of projects with capital investment \leq 100 crores. Therefore CER shall be 1.0% of total project cost. UTCL has allocated Rs. 1.20 Crore under CER which is 24% of the project cost.
- (v). With respect to quantitative plan for the issues raised during public hearing and its implementation plan with timeframe and budget, PP reported that quantitative plan

for the issues raised during public hearing and the implementation plan with time frame and budget was submitted. The Committee deliberated the plan.

- (vi). With reference to non-compliance of EC specific condition XV on augmentation of groundwater, PP reported that the mining operations in Baranda Laterite Mine commenced from 24.10.2013. Water requirement for the project is being sourced from Captive desalination plant and ground water have not been withdrawal & utilized. Mining operation will not intersect ground water table. However following measures has been taken for ground water augmentation, (a) Cleaning and Deepening of pond in nearby Village like Baranda, Vayor & Kharai etc. (b) Check dam has been constructed in Village Kharai. And (c) Regular Ground water level is being monitored and Piezo-meter has been constructed.

After submission of information as raised in above said points, again ADS (Additional Details sought) by MoEFCC, which is as (i) Valid executed lease deed in the name of UltraTech, (ii) Proof of submission of the conservation plan to the Chief Wildlife Warden, (iii) List of consultant engaged in the EIA study need to be provided, certificate issued by NABET to the consultant and for the laboratory need to be submitted. (iv) District Survey Report as per S.O 141 (E) dated 15.01.2016 needs to be submitted. District Survey Report has been received from District Dept. vide their letter dated 25.11.2018 and same was submitted to MoEFCC on 13.12.2018. The Committee deliberated the points raised in ADS and by earlier EAC meeting.

The Committee deliberated the proposal and based on the information submitted by PP, the Committee **recommended** the Proposal for grant of Environmental Clearance for enhancement in Production Capacity of Laterite from 36,000 TPA to 2,50,000 TPA (ROM) along with Standard EC conditions as per **Annexure-III**.

The Committee also **recommended** the following specific conditions: (i) Implementation of the Conservation Plan along with budgetary allocation of Rs. 2.27 Crores/ for conservation of wildlife in consultation with State Forest and Wildlife Department and the Plan has been approved from Chief Wildlife Warden vide their letter No WLP/32/C/156 - 157/ 2018 - 19 dated 07.07.2018. (ii) 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. (iii) PP shall implement the following mitigation measures viz. 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. (iv) 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.

(2.5). Sitapuram Limestone Mine over an area of 770.23 ha of M.L-1 & 558.94 ha of M.L-2 (Non forest land) with proposed capacity during current mining scheme period of both the leases is 3.0 MTPA located in survey No 1/p & 3/p at Dondapadu, Ramapuram and Revoor villages, District of Nalgonda. Telangana by M/s Zuari Cement Ltd. (Proposal No. IA/TG/MIN/81043/2018) - Consideration of TOR

The proposal of M/s Zuari Cement Ltd. is for Mining of Limestone for production of 3.0 MTPA of Limestone, mining area of 770.23 ha of M.L-1 & 558.94 ha of M.L-2 located at Villages-Dondapadu, Ramapuram and Revoor, Tehsil- MellaCheruvu, District: Nalgonda, Telangana. The applied area forms a part of Survey of India topo-sheet no.57 P/13 and 65D/1. The lease is located at following latitude and longitudes: Latitude: 16°48'31.6" N to 16°50'42.0" N, Longitude: 70°59'16.2"Eto 80°02'28.7" E, seismic zone-II. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The PP applied online for grant of ToR on 17.11.2018 and submitted the Form1, Pre-feasibility Report, and copy of Letter of Intent. 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) as the Mining lease area is more than 100 Ha.

The Committee **deferred** the proposal as the PP **did not attend** the meeting. The Committee is of the view that PP should submit the requisite information viz. complete details pertaining to mining lease (initial grant, transfer of mining lease, renewal of mining lease, validity of mining lease as on date), Past production details since the inception of mine duly authenticated from DMG, copy of CTO and CTE, comparative of all the figures (waste, O.B., land use, water requirement, etc.) mentioned in the previous EC and what is proposed now, details of any modification/expansion/amendment/change of scope of work/method of mining etc. if any carried out after grant of EC, any corrigendum/ amendment in EC granted by MoEF&CC. **In addition to this the Committee observed that area of mining lease is mentioned as 1336.03 Ha In the Form-1 but EC uploaded in the Form 1 is for the mining lease having area of 777.09 Ha. Thus, PP is requested to provide the complete justification in this regard with supporting documents. The information sought by Committee needs to be submitted within one month.**

(2.6). Proposal under the provision of Notification dated 06.04.2018 of Kaoni Gypsum Mining Project [ML No 01/02; 250.53 Ha) of M/s FCI Aravali Gypsum & Minerals India Ltd. Located in village Kanoni, Tehsil & District Bikaner, Rajasthan. for Gypsum Production 50000 TPA & O.B. Handling 136191 m³- [File No: J-11015/02/2019-IA. II (M); Old File No: J-11015/143/2005-IA. II (M); IA/RJ/MIN/86968/2018] - Consideration of TOR.

The proposal of M/s FCI Aravali Gypsum & Minerals India Ltd. is for Production 50000

TPA Gypsum & O.B. Handling 136191 m³ from Kaoni Gypsum Mining Project [ML No 01/02; 250.53 Ha) Located in village Kanoni, Tehsil & District Bikaner, Rajasthan. The Project Proponent submitted that mining lease area falls under Survey of India Topo-Sheet No. 44 H/4 and between Latitude: N 28°09'14.11" to N 28°10' 9.76" N& Longitude: E 73°04' 58.85" to E 73°06' 44.83". The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The project falls under Schedule 1(a) of mining and is a Category- "A" as the mining lease area is greater than 100 Ha. Further, PP submitted that M/s FCI Aravali Gypsum & Minerals India Ltd. has obtained environmental clearance for Kaoni Gypsum (Minor Mineral) Mining project (ML No 01/02, ML Area 250.53 ha) with production capacity 50,000 TPA Gypsum under the provisions of EIA Notification, 1994 vide letter no J-11015/143/2005-IA. II (M) dated 26th May, 2006. The PP has applied as per provision of S.O. 1530 (E) dated 06.04.2018 online vide proposal no IA/RJ/MIN/7462/2005 on 1.10.2018 but instead of applying for ToR, PP applied under amendment. The Committee therefore **returned the proposal in present form** and is of the view that PP should apply in Form-1 along with requisite information. The Committee is also of the view that PP should submit all the requisite information viz. documents required as per annexure-III of agenda for examining the matter in light of common cause order dated 02.08.2017 and S.O. 804(E) dated 14.03.2017; comparative of all the figures (waste, o.b. , land use, water requirement, etc.) mentioned in the previous EC and what is proposed now, details of any modification/expansion/amendment/change of scope of work/method of mining etc. if any carried out after grant of EC, cluster certificate from DMG as per S.O. 141(E) dated 15.01.2015 and S.O. 2269 dated 1.07.2016. The Committee also noted that as the PP has already applied within the time limit i.e. before 06.10.2018 the Ministry should consider the revised application that will be submitted by the PP. The Committee also noted that PP has submitted that they have changed the consultant for this project. As PP did not attend the meeting the Committee recorded in the minutes that PP should apply at the earliest so that the proposal can be considered. In pursuant to recommendation of the EAC the PP now applied in Form-1 for grant of EC under EIA Notification 2006 as per S.O. 1530(E) dated 06.04.2018.

As per the Ministry's Notification S.O. 1530(E) dated 6.04.2018 wherein it has mentioned that "the Hon'ble Supreme Court vide judgment dated the 7th February, 2018 in Special Leave to Appeal (Civil) No. 32138 of 2015 in the matter of Goa Foundation versus M/s Sesa Sterlite Ltd., & Ors. has reiterated that the validity of the environmental clearance for mining projects granted under the EIA Notification, 1994 shall be five years" and "whereas, all mining projects mentioned in clause (b) of fourth paragraph above are required to obtain environmental clearance under the EIA Notification, 2006, in pursuance of the aforesaid judgments of the Hon'ble Supreme Court". The clause (b) of the notification is "mining projects, which were granted environmental clearance under the EIA Notification, 1994, and but not obtained environmental clearance for expansion / modernization / amendment under the EIA Notification, 2006." In the instant case the M/s FCI Aravali Gypsum and Minerals India Ltd has obtained the EC under EIA Notification 1994 for production of 50,000 TPA Gypsum from Kaoni Gypsum Mining Project [ML No 01/02; 250.53

Ha) Located in village Kanoni, Tehsil & District Bikaner, Rajasthan under the provisions of EIA Notification, 1994 vide letter no J-11015/143/2005-IA. II (M) dated 26th May, 2006 and now applied for EC for production capacity of 50,000 TPA of Gypsum and handling of 136191 m³ /annum of over burden (in pursuant to Ministry's O.M. Z-11013/49/2018 IA. II(M) dated 18.06.2018). As per the notification the PP shall make application within six months (i.e. up to 5.10.2018) from the date of issue of this notification in Form-1 as given in Appendix-II of the EIA Notification, 2006, for grant of environmental clearance under the provisions of the EIA Notification, 2006, and all such applications shall be considered by the concerned Expert Appraisal Committee or the State Level Expert Appraisal Committee, as the case may be, who shall decide on the due diligence necessary including preparation of Environmental Impact Assessment Report and public consultation and the application shall be appraised accordingly for grant of environmental clearance. In the instant case PP as per the notification S.O.1530 (E) dated 06.04.2018 applied vide proposal no IA/RJ/MIN/7462/2005 on 1.10.2018 for grant of amendment in EC but as per direction of EAC re-applied vide proposal **IA/RJ/MIN/86968/2018 dated 29.11.2018** and submitted the Form-1& PFR. The proposal is placed in EAC Meeting held during 22-23 January, 2019.

The PP submitted that the mining lease over an area of 250.53 ha has been granted in favor of M/s FCI Aravali Gypsum and Minerals India Ltd by the DMG vide order no. F-3(141) Khan/Group-2/07 on dated **17/10/2011** for a period of 20 years i.e. 01/04/2003 to 31/03/2023. As per the amendment in MMDR Act-1957 came in to existence on dated 12.01.2015 where the lease period is automatically extended for 50 years i.e. up to 31.03.2053.

Observation of EAC: The Committee observed that PP has not submitted any letter from State Government wherein the validity of the mining lease is extended upto 31.03.2053.

The PP submitted that Mining Scheme with Progressive Mine Closure Plan has been approved by Superintendent Mining Engineer, Mines & Geology Deptt, Bikaner vide letter No SME/BKN/CC-III/M. S/ML-01/02/679 dated 01.03.2017. The method of mining will be opencast mechanized without drilling and blasting.

The PP submitted the past production details duly authenticated by DMG and other information as per Annexure-III of agenda item to examine the proposal in light of Common Cause Order dated 02.08.2017 and S.O. 804(E) dated 14.03.2017. The PP also submitted that mine has not undergone any modernization, expansion, or change of mining technology. The Committee observed that it seems that there is no violation of Common Cause Order dated 02.08.2017 and S.O. 804(E) dated 14.03.2017. The Committee asked the PP to submit the copy of consent to operate issued for the F.Y 2011-12 to the Ministry. The Committee observed that there is a change in the land use figure as mentioned in the EC letter and as proposed now by the PP. The Committee is of the view that that EC was granted for mining over 250.53 Ha @ 50,000 TPA Gypsum, the land use mentioned in the EC letter seems to be of immediate 5-year plan period and not at conceptual stage. The Committee observed that PP has not exceeded the production capacity thus there is no increase in the pollution load.

The PP in the Form-1 mentioned that General Condition is not applicable for the project and the project does not require clearance under Forest Conservation Act, 1980, Wildlife Protection Act, 1972. The PP also mentioned that the total water requirement for the project will be 80 KLD (48 KLD for dust suppression, 3 KLD for domestic, 29 KLD for plantation). The PP submitted that out of total lease area, 32.68 ha is the agricultural land and remaining 217.85 ha is government land. There is no stream and nalla exists within lease area. After excavation of mineral 32.68 ha out of 250.53 ha will be used for agriculture purpose and remaining Govt. waste land will be developed as green belt area. The PP submitted that the total project cost shall be 42.74 Lakh and will provide direct employment to 31 persons and indirect employment to 100 persons.

The Committee observed that PP was previously asked to submit *a comparative of all the figures (waste, o.b., land use, water requirement, etc.) mentioned in the previous EC and what is proposed now, details of any modification/expansion/amendment/change of scope of work/method of mining etc. if any carried out after grant of EC, cluster certificate from DMG as per S.O. 141(E) dated 15.01.2015 and S.O. 2269 dated 1.07.2016.* But in the instant case PP did not submit the comparative statement and cluster certificate. However, in the presentation made during the meeting PP provided the details of the land use for this proposal. The Committee compared the same with that provided in the previous EC and observed that there is a change is a significant change in. The Committee also observed that there is a significant increase in the requirement of water, previously it was 9 KLD and now it is 80 KLD. In the previous EC top soil excavation was mentioned as 3701.4 m³ (i.e. 44416.8 m³) but now the same has been revised to 136191 m³. **The Committee observed that although PP did not increase the production over the approved EC capacity and there is no violation of Common Cause order dated 2.08.2017 and S.O. 804(E) dated 14.03.2017 as per past production details submitted by PP. But as there is a change in total excavation, water requirement, waste generation the request of PP for exemption of Public Hearing cannot be considered.** The Committee thus, **recommended** the proposal under the provision of Notification dated 06.04.2018 for grant of Standard TOR (as per **Annexure-1**) and following specific Term of References (ToR) for Production 50000 TPA (Gypsum) & O.B. Handling 136191 m³ from Kaoni Gypsum Mining Project [ML No 01/02; 250.53 Ha) for preparation of EIA/EMP Report and conducting public hearing as per provision of EIA Notification 2006.

Specific ToR (Mining)

- a) 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.
- b) PP should submit the details of statutory clearances, permissions, No objection certificates, consents etc. required for this project under various Acts, Rules and regulations.
- c) The PP should submit the detailed plan in tabular format (year-wise for 30 years) 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, 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 30 years) 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.

- d) The 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. The PP should submit the year wise target for reduction in consumption of ground water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred in this needs to be submitted.
- e) The 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).
- f) The PP should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance & Corporate Environmental Responsibility needs to be submitted.
- g) PP should submit the measures to be adopted for prevention of illegal mining and pilferage of mineral needs to be submitted. The procedure for re-conciliation of the material excavated from the mines needs to be submitted, frequency of re-conciliation of the material excavated with material dispatched, material stored within the mining lease area, waste/O.B/reject dumped in the mining lease area, top soil dumped and utilized needs to be submitted. The provision of internal and external audit and how the records of re-conciliation will be maintained. In addition to these details of security arrangements, use of surveillance system, installation of weighbridge, GPS tracking system etc. needs to be submitted. In addition to this conversion factor i.e. specific gravity of all type of material available in the mining lease needs to be submitted along with test certificate from the authorized agency.
- h) PP should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.
- i) 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 supported with the line source modeling and isopleths. Further, frequency of testing of Poly Aromatic 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.
- j) PP should clearly bring out that what is the specific diesel consumption and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
- k) PP should bring out the awareness campaign to be carried out on various environmental issues, practical training facility to be provided to the environmental

engineers/diploma holders, mining engineers/diploma holders, geologists, and other trades related to mining operations. Target for the same needs to be submitted.

(2.7). Proposal under the provision of Notification dated 06.04.2018 of Mohangarh Gypsum Mining Project [ML No 07/03; 200 Ha) of M/s FCI Aravali Gypsum & Minerals India Ltd. Located in village Mohangarh, Tehsil & District Jaisalmer, Rajasthan for Gypsum Production 100000 TPA & O.B. Handling 7936 m³- [File No: J-11015/03/2019-IA. II (M);Old File No: J-11015/180/2005-IA. II (M); IA/RJ/MIN/87020/2018]

The proposal of M/s FCI Aravali Gypsum & Minerals India Ltd. is for Production @100000 TPA Gypsum & O.B. Handling 7936m³ from Mohangarh Gypsum Mining Project [ML No 07/03; 200 Ha). The mine is located in village Mohangarh, Tehsil & District Jaisalmer, Rajasthan. The Project Proponent submitted that mining lease area falls under Survey of India Topo-Sheet No. 40 M/7 (Old) or G 42 F/7 (New) and between Latitude: N 27°17'48.38" to N 27°19' 20.59" N & Longitude: E 73°16' 25.93" to E 73°18' 32.0". The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The project falls under Schedule 1(a) of mining and is a Category- "A" as the mining lease area is greater than 100 Ha. Further, PP submitted that M/s FCI Aravali Gypsum & Minerals India Ltd. obtained environmental clearance for Kaoni Gypsum (Minor Mineral) Mining project (ML No 07/03; ML Area 200 Ha) with production capacity 100,000 TPA Gypsum under the provisions of EIA Notification, 1994 vide letter no J-11015/180/2005-IA. II (M) dated 22nd December, 2005. The PP has applied as per provision of S.O. 1530 (E) dated 06.04.2018 online vide proposal no IA/RJ/MIN/7664/2005 on 2.10.2018 but instead of applying for ToR, PP applied under amendment. The Committee in its meeting held during 15-16 November, 2018 **returned the proposal in present form** and is of the view that PP should apply in Form-1 along with requisite information. The Committee is also of the view that PP should submit all the requisite information viz. documents required as per annexure-III of agenda for examining the matter in light of common cause order dated 02.08.2017 and S.O. 804(E) dated 14.03.2017; comparative of all the figures (waste, o.b , land use, water requirement, etc.) mentioned in the previous EC and what is proposed now, details of any modification/expansion/amendment/change of scope of work/method of mining etc. if any carried out after grant of EC, cluster certificate from DMG as per S.O. 141(E) dated 15.01.2015 and S.O. 2269 dated 1.07.2016. The Committee also noted that as the PP has already applied within the time limit i.e. before 06.10.2018 the Ministry should consider the revised application that will be submitted by the PP. The Committee also noted that PP has submitted that they have changed the consultant for this project. PP did not attend the meeting. The Committee observed that PP should apply at the earliest so that the proposal can be considered. In pursuant to recommendation of the EAC the PP now applied in Form-1 for grant of EC under EIA Notification 2006 as per S.O. 1530(E) dated 06.04.2018.

As per the Ministry's Notification S.O. 1530(E) dated 6.04.2018 wherein it has mentioned that "the Hon'ble Supreme Court vide judgment dated the 7th February, 2018 in

Special Leave to Appeal (Civil) No. 32138 of 2015 in the matter of Goa Foundation versus M/s Sesa Sterlite Ltd., & Ors. has reiterated that the validity of the environmental clearance for mining projects granted under the EIA Notification, 1994 shall be five years” and “whereas, all mining projects mentioned in clause (b) of fourth paragraph above are required to obtain environmental clearance under the EIA Notification, 2006, in pursuance of the aforesaid judgments of the Hon’ble Supreme Court”. The clause (b) of the notification is “mining projects, which were granted environmental clearance under the EIA Notification, 1994, and but not obtained environmental clearance for expansion / modernization / amendment under the EIA Notification, 2006.” In the instant case the M/s FCI Aravali Gypsum and Minerals India Ltd has obtained the EC under EIA Notification 1994 for production of 100,000 TPA Gypsum from Mohangarh Gypsum Mining Project [ML No 07/03; 200.0 Ha) Located in village Mohangarh, Tehsil & District Mohangarh, Rajasthan under the provisions of EIA Notification, 1994 vide letter no J-11015/180/2005-IA. II (M) dated 22nd December, 2005. and now applied for EC for production capacity of 100000 TPA of Gypsum and handling of 7936 m³ /annum of over burden. As per the notification the PP shall make application within six months (i.e. up to 5.10.2018) from the date of issue of this notification in Form-1 as given in Appendix-II of the EIA Notification, 2006, for grant of environmental clearance under the provisions of the EIA Notification, 2006, and all such applications shall be considered by the concerned Expert Appraisal Committee or the State Level Expert Appraisal Committee, as the case may be, who shall decide on the due diligence necessary including preparation of Environmental Impact Assessment Report and public consultation and the application shall be appraised accordingly for grant of environmental clearance. In the instant case PP as per the notification S.O.1530 (E) dated 06.04.2018 applied vide proposal no IA/RJ/MIN/7664/2005 on 2.10.2018 for grant of amendment in EC but as per direction of EAC re-applied vide proposal IA/RJ/MIN/87020/2018 dated 29.11.2018 and submitted the Form-1& PFR. The proposal is placed in EAC Meeting held during 22-23 January, 2019.

The PP submitted that the Mining lease over an area of 200 ha has been granted in favor of FCI Aravali Gypsum and Minerals India Ltd by the DMG, Rajasthan vide order no. F-3(7)/MIN/Group-2/2006 on dated 20.07.2007 valid for 20 years (i.e. 19.07.2027). As per the amendment in MMDR Act-1957 came in to existence on dated 12.01.2015 where the lease period is automatically extended for 50 years i.e. up to 16.12.2057.

Observation of EAC: The Committee observed that the PP has not submitted any letter from State Government wherein the validity of the mining lease is extended upto 31.03.2053.

The PP submitted that Mining Scheme with Progressive Mine Closure Plan has been approved by Superintendent Mining Engineer, Mines & Geology Dept., Bikaner SME/BKN/Major/ML-07/03/1464 dated 12.05.2017. The method of mining will be opencast mechanized without drilling and blasting.

The PP submitted the past production details duly authenticated by DMG and other information as per Annexure-III of agenda item to examine the proposal in light of Common Cause Order dated 02.08.2017 and S.O. 804(E) dated 14.03.2017. The PP also submitted

that mine has not undergone any modernization, expansion, or change of mining technology. The Committee observed that it seems that there is no violation of Common Cause Order dated 02.08.2017 and S.O. 804(E) dated 14.03.2017. The Committee asked the PP to submit the copy of consent to operate issued for the F.Y 2011-12 to 2014-15 to the Ministry. The Committee observed that there is a change in the land use figure as mentioned in the EC letter and as proposed now by the PP. The Committee is of the view that that EC was granted for mining over 200 Ha @ 100000 TPA Gypsum, the land use mentioned in the EC letter seems to be of immediate 5-year plan period and not at conceptual stage. The Committee observed that PP has not exceeded the production capacity thus there is no increase in the pollution load.

The PP in the Form-1 mentioned that General Condition is not applicable for the project and the project does not require clearance under Forest Conservation Act, 1980, Wildlife Protection Act, 1972. The PP also mentioned that the total water requirement for the project will be 28 KLD (12 KLD for dust suppression, 1.0 KLD for domestic, 15.0 KLD for plantation). The PP submitted that out of total lease area, 31.25 ha is the private agricultural land and remaining 168.75 ha is government waste land. There is no stream and nalla exists within lease area. After excavation of mineral 31.25 ha out of 200.0 ha will be used for agriculture purpose and remaining Govt. waste land will be developed as green belt area. The PP submitted that the total project cost shall be 40.0 Lakh and will provide direct employment to 251 persons.

The Committee observed that in the previous EC the area for excavation was mentioned as 45 ha and total undisturbed area as 78 Ha. The PP now proposed that at the end of 5 years the area mining shall be 35.3136 Ha and undisturbed area will be 156.5664 Ha. The Committee observed that there is no change in total excavation. However, there is a slight increase in the water requirement. They also observed that public hearing for the said project was conducted on 14.10.2003. Thus, Committee is of the view that as there is no change in the scope of mining fresh public hearing is not required. The Committee also observed that life of mine was mentioned as 8 years but there was no specific condition mentioned in the EC letter regarding restricting the mining operation to 8 years only. The Committee also observed that validity of mining lease is up to 19.07.2027.

Based on the discussion held and documents submitted the Committee **recommended** the proposal of M/s FCI Aravali Gypsum & Minerals India Ltd. for Production 100000 TPA Gypsum & O.B. Handling 7936m³ from Mohangarh Gypsum Mining Project [ML No 07/03; 200 Ha) Located in village Mohangarh, Tehsil & District Jaisalmer, Rajasthan for prescribing Standard Term of Reference along with following Specific Term of Reference for preparation of EIA/EMP report after collecting one season base line data and after incorporating the issues raised during public hearing conducted on 14.10.2003 and commitment fulfilled by the PP. The grant of ToR is **subject to submission of cluster certificate, past production details 2005-06 to 2007-2008, CTE,CTO from 2005-06 to 2006-07 and 2011-12 to 2014-15, a letter from State Government regarding the validity of this mining lease and examination in light of Common Cause order dated 02.08.2017 and S.O. 804(E) dated 14.03.2017.**

Specific ToR (Mining):

- a) 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.
- b) PP should submit the details of statutory clearances, permissions, No objection certificates, consents etc. required for this project under various Acts, Rules and regulations.
- c) The PP should submit the detailed plan in tabular format (year-wise for 30 years) 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, 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 30 years) 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.
- d) The 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. The PP should submit the year wise target for reduction in consumption of ground water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred in this needs to be submitted.
- e) The 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).
- f) The PP should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance & Corporate Environmental Responsibility needs to be submitted.
- g) PP should submit the measures to be adopted for prevention of illegal mining and pilferage of mineral needs to be submitted. The procedure for re-reconciliation of the material excavated from the mines needs to be submitted, frequency of re-reconciliation of the material excavated with material dispatched, material stored within the mining lease area, waste/O.B/reject dumped in the mining lease area, top soil dumped and utilized needs to be submitted. The provision of internal and external audit and how the records of re-reconciliation will be maintained. In addition to these details of security arrangements, use of surveillance system, installation of weighbridge, GPS tracking system etc. needs to be submitted. In addition to this

conversion factor i.e. specific gravity of all type of material available in the mining lease needs to be submitted along with test certificate from the authorized agency.

- h) PP should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.
- i) 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 supported with the line source modeling and isopleths. 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.
- j) PP should clearly bring out that what is the specific diesel consumption and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
- k) PP should bring out the awareness campaign to be carried out on various environmental issues, practical training facility to be provided to the environmental engineers/diploma holders, mining engineers/diploma holders, geologists, and other trades related to mining operations. Target for the same needs to be submitted.
- l) In case of Cluster situation, the EIA/EMP should be prepared for entire cluster.

(2.8). Proposal under the provision of Notification dated 06.04.2018 of Mohangarh Gypsum Mining Project [ML No 27/62; 501.67 Ha) of M/s FCI Aravali Gypsum & Minerals India Ltd. Located in village Mohangarh, Tehsil & District Jaisalmer, Rajasthan for Gypsum Production 4.5 Lakh TPA & O.B. Handling 29251 m³/annum- [File No: J-11015/04/2019-IA. II (M); Old File No: J-11015/435/2005-IA. II (M); IA/RJ/MIN/87033/2018]

The proposal of M/s FCI Aravali Gypsum & Minerals India Ltd. is for Production 4.5 Lakh TPA Gypsum & O.B. Handling 29251 m³/annum from Mohangarh Gypsum Mining Project [ML No 27/62; 501.67 Ha) Located in village Mohangarh, Tehsil & District Jaisalmer, Rajasthan. The Project Proponent submitted that mining lease area falls under Survey of India Topo-Sheet No. 40 M/7 (Old) or G 42 F/7 (New) and between Latitude: N 27°17'46.77" to N 27°19' 34.57" N & Longitude: E 71°16' 2.58" to E 71°17' 47.69". The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

Observation of EAC: The Committee observed that in the form 1 the OB handling was mentioned as 29251 m³/annum but in the presentation made by the PP same is mentioned as 129251 m³/annum. Thus, PP needs to submit a justification in this regard clearly

mentioning the quantity of overburden to be handled.

The project falls under Schedule 1(a) of mining and is a Category- "A" as the mining lease area is greater than 100 Ha. Further, PP submitted that M/s FCI Aravali Gypsum & Minerals India Ltd. obtained environmental clearance for Mohangarh Gypsum (Minor Mineral) Mining project (ML No 27/62; ML Area 501.67 Ha) with production capacity 4.5 Lakh TPA Gypsum under the provisions of EIA Notification, 1994 vide letter no J-11015/435/2005-IA. II (M) dated 9th June, 2006. The PP has applied as per provision of S.O. 1530 (E) dated 06.04.2018 online vide proposal no IA/RJ/MIN/11529/2005 on 2.10.2018 but instead of applying for ToR, PP applied under amendment. The Committee in its meeting held during 15-16 November, 2018 **returned the proposal in present form** and is of the view that PP should apply in Form-1 along with requisite information. The Committee is also of the view that PP should submit all the requisite information viz. documents required as per annexure-III of agenda for examining the matter in light of common cause order dated 02.08.2017 and S.O. 804(E) dated 14.03.2017; comparative of all the figures (waste, o.b , land use, water requirement, etc.) mentioned in the previous EC and what is proposed now, details of any modification/expansion/amendment/change of scope of work/method of mining etc. if any carried out after grant of EC, cluster certificate from DMG as per S.O. 141(E) dated 15.01.2015 and S.O. 2269 dated 1.07.2016. The Committee also noted that as the PP has already applied within the time limit i.e. before 06.10.2018 the Ministry should consider the revised application that will be submitted by the PP. The Committee also noted that PP has submitted that they have changed the consultant for this project. PP did not attend the meeting. The Committee observed that PP should apply at the earliest so that the proposal can be considered. In pursuant to recommendation of the EAC the PP now applied in Form-1 for grant of EC under EIA Notification 2006 as per S.O. 1530(E) dated 06.04.2018.

As per the Ministry's Notification S.O. 1530(E) dated 6.04.2018 wherein it has mentioned that "the Hon'ble Supreme Court vide judgment dated the 7th February, 2018 in Special Leave to Appeal (Civil) No. 32138 of 2015 in the matter of Goa Foundation versus M/s Sesa Sterlite Ltd., & Ors. has reiterated that the validity of the environmental clearance for mining projects granted under the EIA Notification, 1994 shall be five years" and "whereas, all mining projects mentioned in clause (b) of fourth paragraph above are required to obtain environmental clearance under the EIA Notification, 2006, in pursuance of the aforesaid judgments of the Hon'ble Supreme Court". The clause (b) of the notification is "mining projects, which were granted environmental clearance under the EIA Notification, 1994, and but not obtained environmental clearance for expansion / modernization / amendment under the EIA Notification, 2006." In the instant case the M/s FCI Aravali Gypsum and Minerals India Ltd has obtained the EC under EIA Notification 1994 for increase in production from 2.5 Lakh TPA to 4.5 Lakh TPA Gypsum from Mohangarh Gypsum Mining Project [ML No 27/62; 504.67 Ha) Located in village Mohangarh, Tehsil & District Mohangarh, Rajasthan under the provisions of EIA Notification, 1994 vide letter no J-11015/435/2005-IA. II (M) dated 9th June, 2006. and now applied for EC for production capacity of 4.5 Lakh TPA of Gypsum and handling of 29251 m³ /annum of over burden. As per the notification the PP shall make application within six months (i.e. up to 5.10.2018)

from the date of issue of this notification in Form-1 as given in Appendix-II of the EIA Notification, 2006, for grant of environmental clearance under the provisions of the EIA Notification, 2006, and all such applications shall be considered by the concerned Expert Appraisal Committee or the State Level Expert Appraisal Committee, as the case may be, who shall decide on the due diligence necessary including preparation of Environmental Impact Assessment Report and public consultation and the application shall be appraised accordingly for grant of environmental clearance. In the instant case PP as per the notification S.O.1530 (E) dated 06.04.2018 applied vide proposal no IA/RJ/MIN/11529/2005 on 2.10.2018 for grant of amendment in EC but as per direction of EAC re-applied vide proposal **IA/RJ/MIN/87033/2018 dated 29.11.2018** and submitted the Form-1& PFR. The proposal is placed in EAC Meeting held during 22-23 January, 2019.

The PP submitted that the Mining lease over an area of 501.67 ha has been granted in favor of Fertilizer Corporation India Ltd by the Central Govt. by his special power vide notification no. F-4(4)/63-MII/3228 on dated 20.02.1964.

Observation of EAC: The Committee observed that in the document submitted by the PP the validity of mining lease is mentioned. Further, as per MMDR Act 2015 the validity of any mining lease in the country will be till 2020 (for non-captive mines), 2030 (for captive mines), or 50 years from initial grant of mining lease whichever is later. In the instant case the lease was granted in 1964 and shall be valid for maximum 50 years i.e. up-to 2014. Thus, the Committee was of the view that the PP should submit a letter from State Government regarding the validity of this mining lease. In addition to this Ministry may also seek clarification in this regard from Ministry of Mines.

The PP submitted that Mining Scheme with Progressive Mine Closure Plan has been approved by Superintendent Mining Engineer, Mines & Geology Dept, Bikaner SME/BKN/CC-4/M.P/ML-27/62/1502 dated 17.05.2017. The method of mining will be opencast mechanized without drilling and blasting.

The PP submitted the Annexure III as mentioned in agenda.

Observation of EAC: The PP submitted the Annexure III as per the agenda item wherein the past production details shown from 1993-94 onwards. However, PP did not submit the financial year-wise past production details duly authenticated by DMG. In addition to this PP has not submitted the copy of CTO for the period 01.08.2007 to 31.07.2016. The Committee is of the view that this information is essential for ascertaining violation of Common Cause order dated 02.08.2017 and S.O. 804(E) dated 14.03.2017.

The PP in the Form-1 mentioned that General Condition is not applicable for the project and the project does not require clearance under Forest Conservation Act, 1980, Wildlife Protection Act, 1972. The PP also mentioned that the total water requirement for the project will be 28.5 KLD (12 KLD for dust suppression, 1.5 KLD for domestic, 15.0 KLD for plantation). The PP submitted the required quantity of water will be sourced through tanker. The PP submitted that out of total lease area, 7.20 ha is the private agricultural land and remaining 494.47 ha is government waste land. There is no stream and nalla exists within lease area. After excavation of mineral 7.20 ha out of 501.67 ha will be used for

agriculture purpose and remaining Govt. waste land will be developed as green belt area. The PP submitted that the total project cost shall be 80.0 Lakh and will provide direct employment to 28 persons.

Based on the discussion held and documents submitted the Committee observed that the **PP was already informed about the requirement of the document for the appraisal of the project but PP did not submit the same.** The Committee therefore **deferred** the proposal and is of the view that proposal can only be considered after the PP submits the requisite information viz. 1) comparative of all the figures (waste, o.b., land use, water requirement, etc.) mentioned in the previous EC and what is proposed now, details of any modification/expansion/amendment/change of scope of work/method of mining etc. if any carried out after grant of EC, cluster certificate from DMG as per S.O. 141(E) dated 15.01.2015 and S.O. 2269 dated 1.07.2016, 2) a letter from State Government regarding the validity of this mining lease, 3) past production details financial year-wise and duly authenticated by DMG since 1992-93, 4) copy of CTO for the period 01.08.2007 to 31.07.2016 and 5) quantity of OB to be handled.

(2.9). Proposal of M/s India Cements Ltd. for increase in Production Capacity from 2.0 to 7.7 MTPA of Coromandal Limestone Mines (ML 602.137 ha.), located at Chilamkur Village in Yerraguntla Mandal, Y.S.R. Kadapa District of Andhra Pradesh, [File No: J-11015/05/2019-IA. II(M); Old File No. J-11015/124/2018 IA. II (M), J-11015/47/2003-IA. II (M); Proposal No. IA/AP/MIN/88547/2018 and IA/AP/MIN/77201/2018; Consultant: B.S. Envi Tech Pvt. Ltd.] - Consideration of TOR

The Proposal of M/s India Cements Ltd for increase in Production Capacity from 2.0 to 7.7 MTPA of Coromandal Limestone Mines (ML 602.137 ha.) located at Chilamkur Village in Yerraguntla Mandal, Y.S.R. Kadapa District of Andhra Pradesh. The mining lease falls between Latitude 14° 38' 51.0"N - 14° 40' 31.1"N, and longitude 78° 27' 55.4"E- 78° 29' 40.4"E, with an average altitude of 175 m above msl. The area is covered in the Survey of India Topo-sheet nos. 57 J/6. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The PP applied for Terms of Reference (TOR) for Increase of Limestone Production from 2.0 to 5.0 MTPA to MoEF & CC vide Proposal No. IA/AP/MIN/69926/2017 on 27/09/2017. And the same was called for the 23rd EAC Meeting held on 23-24th October, 2017. But the proponent didn't attend the EAC meeting, since ICL has a proposal to further increase the Limestone capacity. Hence, the proposal was withdrawn. The PP then applied online vide proposal No. **IA/AP/MIN/77201/2018** for grant of ToR under Category A: 1(a) on 28.09.2018 and the proposal was considered in the EAC Meeting held on 23-24 October, 2018 wherein the Committee returned the proposal in the present form. The Committee also observed the "**Rameshvaram National Park**" was notified on 19.11.2005 and later on the name of the same was changed as "**Rajiv Gandhi National Park**" was on 26.12.2005. The Committee also observed that EC was previously granted to PP vide LR No. J-11015/47/2003-IA. II (M) dated 7.07.2004. The EC for increase in production from 1.8 MTPA to 2.0 MTPA was granted on 30.11.2007.

The matter was thereafter examined in the Ministry and as the PP did not obtained NBWL Clearance from 31.01.2009 to 14.05.2017 thus, the Ministry asked the State Government to initiate action under section 19 of EPA, 1986 and also as per SC Order dated 02.11.2018. The actions is still awaited from the State Govt./PP.

Subsequently, PP applied afresh vide proposal No. IA/AP/MIN/88547/2018 for grant of ToR under Category A: 1(a) on 14.12.2018. The proposal is placed in EAC Meeting held on 22-23 January, 2019 but the **PP did not attend the meeting**. The Committee therefore **deferred** the proposal and is of the view that proposal shall only be considered once the State Government initiate action as per direction of the Ministry. Meanwhile Ministry may examine the matter in light Common Cause Order dated 02.08.2017 & S.O. 804(E) dated 14.03.2017. The Committee observed that the past production details submitted by the PP is till F.Y 2016-17. Thus, the Committee was of the view that PP should submit the past production details duly authenticated by DMG for the remaining period.

(2.10). Total Excavation of 0.118 MTPA (Limestone: 0.1 MTPA + Top Soil : 0.013 MTPA + Over Burden / Waste: 0.005 MTPA) from Kanakadripalli limestone mine (Mining lease area of 435.24 Ha) located at Petnikota & Itikyala Villages, Kolimigundla Mandal, Kurnool District, Andhra Pradesh by M/s The Ramco Cements Limited [File No. J-11015/06/2019-IA.II(M); Proposal No. -IA/AP/MIN/89054/2018]-Consideration of ToR

The proposal of M/s The Ramco Cements Limited is for total Excavation of 0.118 MTPA (Limestone: 0.1 MTPA + Top Soil: 0.013 MTPA + Over Burden / Waste: 0.005 MTPA) for production of 1.0 MTPA limestone from Kanakadripalli limestone mine (ML area 435.24 ha) located at Petnikota & Itikyala Villages, Kolimigundla Mandal, Kurnool District, Andhra Pradesh. The Mining Lease area is a part of the Survey of India Topo sheet No. 57/I/4. The site falls between Latitude 15°02'23.9"N - 15°04'13.1"N and Longitude 78°03'31.3"E - 78°04'54.5"E with an altitude varying from 302 to 334 m above MSL and falls in seismic zone-II. 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) as the Mining lease area is more than 100 Ha. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

Previously PP submitted the proposal online vide IA/AP/MIN/62752/2017 and the proposal was considered in the EAC meeting held during 20-21 March 2019 and 18 September 2017 wherein the committee deferred the proposal for want of requisite information. The proposal was again considered in EAC meeting held during 19-20 July 2018 wherein the Committee observed that the mining lease is valid upto 15.10.2018 and within this short period it would not be possible for the PP to establish the cement plant. The Committee therefore rejected the proposal and asked the PP to apply afresh after getting the extension of the mine lease. PP again applied online via proposal no. IA/AP/MIN/89054/2018 dated 19.12.2018 and submitted the Form 1, Pre-feasibility Report. The proposal is now placed in EAC meeting held during 23-23 January 2019.

The PP submitted that initially the lease was granted vide G.O. Ms. No. 136 dated 15.02.2000 for a period of 30 years i.e. up to 15.02.2020 in favour of M/s Madras Cement Limited wherein it has mentioned that *"the lease shall be liable for cancellation, if the applicant company fails to establish cement plant within 3 years period from the date of grant of mining lease."* The State Government thereafter provided extension of time and the last extension was given vide letter No. 510020/2018/AI-MINES-III-INDS, dated 04.10.2018 issued by Industries & Commerce (M-III) Department for 3 more years i.e. up to 13.10.2021 in favour of M/s The Ramco Cements Ltd (Formerly M/s Madras Cement Limited) to establish the Cement Plant. PP submitted that the subject area will be a captive Limestone mine of Ramco Cement plant which will be located at 3.5 km from the subject mine.

The Project proponent submitted that the mining will be opencast mechanized mining, employing DTH drilling for blast holes. PP submitted that down the hole drilling with 115/150mm dia drilling machine will be deployed for drilling of Blast holes. PP submitted that depth of the hole shall be kept at 8.5 m with sub grade drilling and blast hole shall be sloped at angle of 100 to 150 from vertical. PP submitted that blasting operation will be carried out by using milli second delay detonators with sequential blasting using slurry explosives along with ANFO to achieve better fragmentation, less fly rock and ground vibrations and after blasting the mineral will be loaded into the tippers using hydraulic excavator of 3.0 to 3.50 cum bucket capacity. The limestone will be transported to the plant by 20 tonne capacity tippers. PP submitted that the bench height proposed is 8 m and mining will be carried up to a depth of 283m RL.

PP submitted that the total soil and Overburden/waste generation from the mine for the life of mine is 6.0 million cum and 2.65 million tonnes respectively. The soil generated will be utilized for plantation in barrier zone. PP submitted that the waste soil generated will be stacked in respective temporary dump yards and will be used for reclamation at conceptual stage. PP submitted that wastewater generated from domestic use will be treated in septic tank followed by soak pit. The waste water from Auto garage will be treated in oil and grease trap. The treated waste water will be used for plantation.

PP submitted that the total water requirement for the proposed mine is about 50 m³/day for dust suppression, plantation and domestic purposes. Initially Ground water will be used; later on rain water collected in the mine pit will be used. PP submitted that there is no wildlife sanctuary, national park, Tiger Reserve, Elephant Corridor, eco-sensitive area within the 10 km radius of the project site.

PP submitted that at conceptual stage mining will cover 290.47 Ha. afforestation area on Safety Zones 51.5 Ha. Afforestation on Backfilled area 26.7 Ha Greenbelt in 4.31 Ha Garland Drain 15.57 Ha and the balance 46.69 Ha will come under undisturbed area. Part of the mined out area will be converted into water reservoir and part of the area will be reclaimed with available waste. PP submitted that 7.5 m of mine periphery will be under plantation in an area of 4.31 ha. Afforestation will be taken up on the backfilled area of 26.7

ha. Safety zone for Nala and Road, with the total extent of 82.51 Ha. Native species like Species like Sisoo, ganuga, Neredu, Neem, Mango, chinta and Amala, etc., are proposed. PP submitted that the mine has about 109.68 Million Tonnes of mineable reserves (approx.) which will last for about 1096 years @ 0.1 MTPA. The Proponent submitted that total project cost will be ₹ 2.0 Crore and budget for environment management shall be ₹ 25 Lakhs. PP submitted that the managerial, supervisory, skilled, semi-skilled and unskilled labor totaling to 30 will be engaged as per requirement.

Based on the information submitted and presentation made by PP, the Committee **recommended** the proposal of M/s The Ramco Cements Limited for Total Excavation the capacity of 0.118 MTPA (Limestone: 0.1 MTPA + Top Soil: 0.013 MTPA + Over Burden / Waste: 0.005 MTPA) from Kanakadripalli limestone mine (Mining lease area of 435.24 Ha) located at Petnikota & Itikyala Villages, Kolimigundla Mandal, Kurnool District, Andhra Pradesh for prescribing Standard Term of Reference (ToR) **(Annexure-1)** along with following Specific Term of Reference:

- a) 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.
- b) PP should submit the details of statutory clearances, permissions, No objection certificates, consents etc. required for this project under various Acts, Rules and regulations.
- c) The PP should submit the detailed plan in tabular format (year-wise for 30 years) 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, 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 30 years) 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.
- d) The 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. The PP should submit the year wise target for reduction in consumption of ground water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.
- e) The 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).

- f) The PP should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance & Corporate Environmental Responsibility needs to be submitted.
- g) PP should submit the measures to be adopted for prevention of illegal mining and pilferage of mineral needs to be submitted. The procedure for re-conciliation of the material excavated from the mines needs to be submitted, frequency of re-conciliation of the material excavated with material dispatched, material stored within the mining lease area, waste/O.B/reject dumped in the mining lease area, top soil dumped and utilized needs to be submitted. The provision of internal and external audit and how the records of re-conciliation will be maintained. In addition to these details of security arrangements, use of surveillance system, installation of weighbridge, GPS tracking system etc. needs to be submitted. In addition to this conversion factor i.e. specific gravity of all type of material available in the mining lease needs to be submitted along with test certificate from the authorized agency.
- h) PP should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.
- i) 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 supported with the line source modeling and isopleths. 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.
- j) PP should clearly bring out that what is the specific diesel consumption and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
- k) PP should bring out the awareness campaign to be carried out on various environmental issues, practical training facility to be provided to the environmental engineers/diploma holders, mining engineers/diploma holders, geologists, and other trades related to mining operations. Target for the same needs to be submitted.

(2.11). Proposal under the provision of Notification dated 06.04.2018 of M/s Penna Cement Industries Limited, (PCIL) for enhancement of the limestone production from 1.5 to 1.8 MTPA with Total Excavation increase from 1.552 to 1.864 MTPA (1.800 MTPA + Interstitial Clay : 0.038 MTPA + Top Soil : 0.026 MTPA) of Chanaakya Cements Limestone Mine having mining lease area 354.236 ha located at

Ganeshpahad/Sunypahad (Villages), Damaracherla/Palakveedu (Mandals), Nalgonda Districts, Telangana State. [File No.J-11015/07/2019-IA.II(M);Proposal No. -IA/AP/MIN/89054/2018]-Consideration of Proposal under EIA notification 2006 and Ministry's Notification vide S.O. (E) 1530, dated 06.04.2018 and enhancement in production.

The proposal of M/s Penna Cement Industries Limited, (PCIL) is for obtaining EC under EIA Notification 2006 as required as per Notification S.O. 6.04.2018 along with name change and enhancement of limestone production from 1.5 to 1.8 MTPA with total Excavation increase from 1.552 to 1.864 MTPA of Chanaakya Cements Limestone Mine having mining lease area 354.236 ha located at Ganeshpahad/Sunypahad (Villages), Damaracherla/Palakveedu (Mandals), Nalgonda Districts, Telangana State. The applied area forms a part of Survey of India topo-sheet no.56/P/10. The lease is located at following latitude and longitudes: Latitude: 16°42'26.80"N - 16°44'1.30"N, Longitude: 79°40'11.30"E - 79°41'45.40"E and falls in seismic zone-II. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

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) as the Mining lease area is more than 100 Ha. PP submitted that M/s Penna Cement Industries Limited, (PCIL) has obtained EC under the EIA Notification 1994, vide Ministry's letter No. J-11015/32/2001-IA. II (M) dated 10.12.2003 for production of 1.5 MTPA limestone in the name of M/s Chanakya Cements Limited Limestone at Ganeshpahad / Sunypahad (Villages), Damaracherla/Palakveedu (Mandals), Nalgonda Districts, Telangana State.

As per the Ministry's Notification S.O. 1530(E) dated 6.04.2018 wherein it has mentioned that "the Hon'ble Supreme Court vide judgment dated the 7th February, 2018 in Special Leave to Appeal (Civil) No. 32138 of 2015 in the matter of Goa Foundation versus M/s Sesa Sterlite Ltd., & Ors. has reiterated that the validity of the environmental clearance for mining projects granted under the EIA Notification, 1994 shall be five years" and "whereas, all mining projects mentioned in clause (b) of fourth paragraph above are required to obtain environmental clearance under the EIA Notification, 2006, in pursuance of the aforesaid judgments of the Hon'ble Supreme Court". The clause (b) of the notification is "mining projects, which were granted environmental clearance under the EIA Notification, 1994, and but not obtained environmental clearance for expansion / modernization / amendment under the EIA Notification, 2006." In the instant case the PP has obtained the EC under EIA Notification 1994 for 1.5 MTPA and now applied for EC for name change and enhancement of limestone production from 1.5 to 1.8 MTPA with total Excavation increase from 1.552 to 1.864 MTPA (1.800 MTPA + Interstitial Clay: 0.038 MTPA + Top Soil: 0.026 MTPA). As per the notification the PP shall make application within six months (i.e. up to 5.10.2018) from the date of issue of this notification in Form-1 as given in Appendix-II of the EIA Notification, 2006, for grant of environmental clearance under the provisions of the EIA Notification, 2006, and all such applications shall be considered by the concerned Expert Appraisal Committee or the State Level Expert Appraisal Committee, as the case may be,

who shall decide on the due diligence necessary including preparation of Environmental Impact Assessment Report and public consultation and the application shall be appraised accordingly for grant of environmental clearance.

PP submitted the proposal online vide IA/TG/MIN/80284/2018. Ministry raised EDS and then PP vide proposal no. IA/TG/MIN/89544/2001 dated 24.12.2018 resubmitted the proposal for grant of ToR after incorporating the issue raised through EDS and submitted the Form1 and Pre-Feasibility Report.

The PP submitted that initially, the lease was granted in the name of Chaanakya Cements Limited vide G.O.Ms. No. 563 Dated 19.11.2001 issued from Industries and Commerce Department, Govt. of Andhra Pradesh. PP submitted lease deed in Form K in the name of Chaanakya Cements Limited. PP submitted that lease was transferred in favour of M/s Penna Cement Industries Ltd., Vide G.O.Ms.No.110 dated 17.04.2006 issued from Industries and Commerce Department, Govt. of Andhra Pradesh for un-expired portion of the lease period i.e. 19.12.2021. PP submitted that the transfer of Environmental Clearance in the name of M/s Penna Cement Industries Limited was applied in 2017 which is in process.

The Project proponent submitted that the mining plan was approved by Indian Bureau of Mines, Hyderabad Regional Office for mining over an extent of 354.236 Ha for 1.5 MTPA Production vide letter no AP/NLG/MP/Lst-48/HYD, Dated 30.06.2017. PP submitted that Mining will be carried out by opencast mechanized mining which involves deep hole drilling and blasting for breaking the rock, hydraulic excavators to handle the broken material and loading into 30T dumpers for transporting the ROM material to crusher. PP submitted that drilling operations are conducted with 150 mm dia. of Atlas Capco BVB-25-10 model drills with compressor of 550 Cfm with spacing and burden of 6 m X 4 m with a sub grade drilling of 10%. Hydraulic excavators with bucket capacity of 3.3m³ are deployed to load the blasted limestone into Dumpers. PP submitted that the crusher outside of the lease area is located adjacent to plant at a maximum distance of 1.0 Km from the working faces and limestone is transported to the crusher by 30 tons dumpers and further sent to stacker and reclaimer by conveyor. PP submitted that the maximum depth of the limestone deposit is 39m hence 4 benches shall be developed.

Observation of EAC: The PP is required to prepare modify the mining plan based on the total excavation for which PP has applied.

PP submitted that the total water requirement for the present water requirement is 70 m³/day and additional water requirement for the proposed expansion is 15 m³/day which will be sourced from mine pit. PP submitted that total mining lease area is 354.236 Ha out of which 255.597 Ha is Govt. Waste Land and 98.639 Ha is agriculture non-irrigated land private patta land owned by PCIL. PP submitted that a total quantity of 1.33 MTPA (@2% of LS) of interstitial clay is generated from the mining activity which will be backfilled in the mined out pits and based on current scheme the Top soil Generation from unbroken area of 189.35 Ha is 0.54 MTPA which will be used for afforestation. PP submitted that there are no

wild life sanctuaries, national parks, elephant/tiger reserves within 10km radius of the study area. PP submitted that nearest reserved forests from the mining lease area are Ravipahad RF – 0.7 km – NE, Saidulnam RF – Adjacent – E, Wazirabad RF – 0.2 km – W, Pasupulabodu RF – Adjacent – E. PP submitted that at the end of mining operations, 257.870 Ha will be mined-out area of which 242.022 Ha will be developed into water reservoir and 15.848 Ha will be backfilled and afforestation will be done. PP submitted that the an area of 16.69 Ha will be developed as afforested area and in 7.5 m barrier zone of about 7.535 ha plantation will be carried out.

PP has submitted Past production details from 2001-02 to 2017-18 duly authenticated by ADMG Nalgonda. PP has submitted the undertaking by the way of affidavit as per compliance of the Office Memorandum vide No.3-50/2017-IA.III (Pt.), dated 30.05.2018. PP submitted that the total mineable reserve is 63.71 million tonne and the life of mine shall be 35 years. The Proponent submitted that total project cost will be ₹ 1.0 Crore and no additional manpower is essential for the proposed expansion.

Based on the discussion held and document submitted by the PP, the Committee **recommended** the proposal as per provision of S.O. 1530(E) dated 06.04.2018 & EIA Notification 2006 as amended for prescribing Standard (Annexure-1) & following specific Term of Reference for enhancement of production capacity from 1.5 to 1.8 MTPA with Total Excavation Increase from 1.552 to 1.864 MTPA (1.800 MTPA + Interstitial Clay : 0.038 MTPA + Top Soil : 0.026 MTPA) **subject to transfer of EC as per para 11 of EIA Notification.**

- a) 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.
- b) PP should submit the details of statutory clearances, permissions, No objection certificates, consents etc. required for this project under various Acts, Rules and regulations.
- c) The PP should submit the detailed plan in tabular format (year-wise for 30 years) 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, 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 30 years) 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.
- d) The 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. The

PP should submit the year wise target for reduction in consumption of ground water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.

- e) The 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).
- f) The PP should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance & Corporate Environmental Responsibility needs to be submitted.
- g) PP should submit the measures to be adopted for prevention of illegal mining and pilferage of mineral needs to be submitted. The procedure for re-conciliation of the material excavated from the mines needs to be submitted, frequency of re-conciliation of the material excavated with material dispatched, material stored within the mining lease area, waste/O.B/reject dumped in the mining lease area, top soil dumped and utilized needs to be submitted. The provision of internal and external audit and how the records of re-conciliation will be maintained. In addition to these details of security arrangements, use of surveillance system, installation of weighbridge, GPS tracking system etc. needs to be submitted. In addition to this conversion factor i.e. specific gravity of all type of material available in the mining lease needs to be submitted along with test certificate from the authorized agency.
- h) PP should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.
- i) 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 supported with the line source modeling and isopleths. 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.
- j) PP should clearly bring out that what is the specific diesel consumption and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
- k) PP should bring out the awareness campaign to be carried out on various environmental issues, practical training facility to be provided to the environmental engineers/diploma holders, mining engineers/diploma holders, geologists, and other trades related to mining operations. Target for the same needs to be submitted.

(2.12). Mining of Mineral Sand, Boulder, Bajri with production capacity of 4, 77,306 TPA by M/s UKFDC located at Malan River Bed, Villages- Lachampur, Haldukhata, Jashodharpur, Tehsil- Kotdwar, District-Pauri Garhwal, Uttarakhand (35.356ha.)-[File No. J-11015/452/2013-IA. II (M); Proposal No IA/UK/MIN/22887/2013]- Amendment in EC

The project proponent vide their letter No. 4051 dated 25.10.2017 requested for amendment in the Environmental Clearance granted vide letter No J11015/452/2013-IA. II (M) dated 02.11.2015 and applied online on 31.10.2017 for amendment of the following:

EC Letter SL No 5: "Project Proponent had made the traffic analysis survey and reported that no of truck deployed 10 per day (10 tonne capacity each) and the level of service remains average. The Project proponent reported that road will be repaired and maintained in good conditions. A supervisor will be appointed to regulate the traffic movement near site. Speed breakers and signage will be maintained at all the sensitive places."

The proposal was considered in the EAC Meeting held on 27th November, 2017. The proponent submitted that the period of extraction for the above proposal is 8 months and 10 tonne tippers are rarely available in the area. The committee considering the request to the proponent **recommended** the amendment in EC to allow deployment of trucks/tipper/tractor up to 10 ton capacity with maximum production not more than 2000 TPD.

The matter was thereafter examined in the Ministry and requisite information was sought from the PP vide letter No J-11015/452/2013-IA. II (M) dated 23.07.2018. The PP vide its letter No 2247 dated 12.07.2018 submitted the District Survey Report, Replenishment Study Report-2017-18, Traffic Management Plan, Production details and copy of Consent to Establish & Consent to Operate. As the PP did not submit the requisite the Ministry vide Lr of even no dated 18.09.2018 requested PP to submit the requisite information. The PP submitted the requisite information online on 7.12.2018& vide letter dated 14.12.2018.

The matter was thereafter examined in the Ministry as per documents submitted by PP it seems to be case of violation and due to this proposal is placed for re-consideration by EAC in its meeting held on 22-23 January, 2019.

The Committee observed that the EC was granted on 02.11.2015 for 477306 TPA (ROM). As per information submitted by the PP, mining was not carried out in F.Y 2015-16. The PP started mining operation on 22.03.2017. The Consent to Establish (CTE) was obtained on 02.05.2017 and Consent to Operate (CTO) was obtained on 02.02.2018. This shows that mining carried out by the PP from 22.03.2017 till 01.02.2018 was without obtaining CTO and it's a violation of Common Cause Order dated 02.08.2017 and should submit the affidavit as per Ministry's O.M. No 30.05.2018 for compliance of Common Cause Order.

The Committee observed that PP during the meeting submitted that production achieved vis-à-vis replenished quantity and following scenarios generates for comparison of production vis-à-vis replenished quantity.

Scenario-1: Replenishment Study Report period wise analysis

Month	Actual Production	Replenishment Study Details	Qty. Permitted as per EC/Replenishment Study Report	O.B. (m3)	C.B. (m3)
Apr-16	0	Pre-Monsoon Period Study (2016-17)			216957
May-16	0				216957
Jun-16	0				216957
Jul-16	0				216957
Aug-16	0				216957
Sep-16	0				216957
Oct-16	0	Post Monsoon Study (2016-17) (23015 m3 safe extractable)	477306 Tonne (216957 m3 @ 2.2 specific gravity)	216957	216957
Nov-16	0				216957
Dec-16	0		23015	23015	23015
Jan-17	0			23015	23015
Feb-17	0			23015	23015
Mar-17	284.9269			23015	22730.07
Apr-17	5431.8971	Pre-Monsoon Period Study (2017-18)			17298.18
May-17	13608.4319				3689.744
Jun-17	0			3689.7	3689.744
Jul-17	0			3689.7	3689.744
Aug-17	0			3689.7	3689.744
Sep-17	0			3689.7	3689.744
Oct-17	0	Post Monsoon Study (2017-18) (20507 m3 safe extractable)			3689.744
Nov-17	0				3689.7
Dec-17	0		20507	20507	17668.64
Jan-18	2838.36			17669	10601.77
Feb-18	7066.87			10602	3711.4
Mar-18	6890.37			3711.4	0.07
Apr-18	3711.33	Pre-Monsoon Period Study (2018-19)			0.07
May-18	0				0.07
Jun-18	0			0.07	0.07
Jul-18	0			0.07	0.07
Aug-18	0			0.07	0.07
Sep-18	0			0.07	0.07

Oct-18	0	Post Monsoon Study		0.07	0.07
		(2018-19) in process			
Nov-18	0	(_ m3 safe extractable)		0.07	0.07
Dec-18	0			0.07	0.07
Jan-19	0			0.07	0.07

Scenario-2: Financial Year Wise Analysis

Year	EC Capacity/ Replacement Report Quantity	Production achieved
2015-16	477306 TPA	
2016-17	23015 M3	284.92 M3 (626.84 Ton)
2017-18	20507 M3	35835.92 M3 (78839.04 Ton)
2018-19	In process	3711.3 m3 (8164.92 Ton)

The Committee observed that it is clear from the above Scenario-1 that PP has not exceeded the quantity of the material replenished and the case should not be considered as violation as it seems in Scenario -2. Based on the discussion held and documents submitted by the PP, the Committee **recommended** the proposal for grant of the following amendment in the operating para no 5 of the EC granted vide Lr No.J11015/452/2013-IA. II (M) dated 02.11.2015.

From: "Project Proponent had made the traffic analysis survey and reported that no of truck deployed 10 per day (10 tonne capacity each) and the level of service remains average. The Project proponent reported that road will be repaired and maintained in good conditions. A supervisor will be appointed to regulate the traffic movement near site. Speed breakers and signage will be maintained at all the sensitive places."

To:"The Project Proponent had made the traffic analysis survey and reported that trucks/tipper/tractor up to 10-ton capacity shall be engaged for maximum production not more than 2000 TPD. The Project proponent reported that road will be repaired and maintained in good conditions. Sufficient number of supervisors will be appointed to regulate the traffic movement near site. Speed breakers and signage will be maintained at all the sensitive places."

(2.13). Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in Rawasan-2 River (a Tributary of River Ganga) with proposed production capacity of 316496.25m³ /annum by M/s Uttarakhand Forest Development Corporation, Uttarakhand located at Rawasan & Mitiveri Villages, Tehsil-Haridwar of Haridwar District, Uttarakhand (MLA 100.59ha) [File No: J-11015/373/2012-IA.II (M); Proposal No: IA/UK/MIN/32107/2013] - Amendment in EC

The Ministry has granted Environmental Clearance vide Letter NoJ-11015/373/2012-IA. II (M) dated 15.03.2016 for Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in Rawasan-2 River (a Tributary of River Ganga) with proposed production capacity of 316496.25 m³/annum by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village-Rawasan & Mitiveri, Tehsil- Haridwar, District-Haridwar, Uttarakhand (MLA: 100.59ha).

The 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.

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.

The matter was examined in the Ministry EC granted vide letter No. J-11015/373/2012-IA. II (M) dated 15.03.2016 was amended vide LR No J-11015/373/2012-IA. II (M) dated 16.05.2018 w.r.t. production capacity which was reduced from **316496.25 m³/annum** to **57994.77m³/annum** and name of the mineral which is replaced from Sand, Bajri and Boulder (Minor Mineral) to River Bed Material (RBM). The additional conditions were also proposed for the project which is as follows keeping the other terms and conditions mentioned in this Ministry's EC letter no J-11015/373/2012-IA. II (M) dated

15.03.2016 same:

- a) Before starting the mining operation the baseline data with respect to initial levels of mining lease, needs to be ascertained. For this permanent bench marks (BM) needs to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level. The entire river bed should be divided suitably with the help of sections, these sections should preferably run across the flow of the river the inter distance between each section should not be less than 50 meters, the profile of the river should be surveyed along these sections to map the entire area. After establishing the ground truthing of entire lease area in the river bed with the help of aforementioned sections the mining should be carried out in a systematic and scientific manner. The mining lease needs to be re-surveyed after every six months for ascertaining the quantum of extraction. The survey is also required to be done at pre-monsoon and post monsoon period to know the quantity of material replenished.
- b) To submit a detailed methodology for carrying out baseline survey and further replenishment study within one month of date of issue of amendment in EC.
- c) Engage Mining Engineer for overall supervision of mining sites and adequate number of supervisors should be engaged for monitoring of each site.

The Hon'ble NGT in O.A. 23 of 2016 in the matter of Vijay Verma Vs UKFDC & Ors in its order dated 26.02.2018 directed Forest Research Institute (FRI), Dehradun to continue the study and submit its report at the earliest. The FRI submitted its interim report to Hon'ble NGT and the Hon'ble NGT disposed of the case vide its order dated 21.12.2018.

The PP applied under amendment in EC and requested for continuing the mining operation during 2018-19. The PP also submitted the replenishment study report prepared by FRI Dehradun. The proposal was placed in EAC Meeting held during 23-24 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.

It was also informed the Committee regarding Lr No 2519/VII-I/20188(21)/18 dated 5.11.2018 received from Principal Secretary, Govt. of Uttarakhand wherein, it has mentioned that National Mission for Clean Ganga has issued direction under section 5 of EPA, 1986 to State Govt. wherein it has mentioned that " Ensure that the decision of Uttarakhand Govt. banning mining in Raiwala to Bhogpur stretch of River Ganga in Haridwar is strictly complied and no illegal mining take place in this stretch of river Ganga within the provision of judgment of Hon'ble NGT in the matter O.A No 10/2015 dated 15.04.2015. The PP

submitted that after this letter another letter was issued by NMCG wherein certain information was asked from the PP and they are in process of submitting the same.

Based on the discussion held the Committee **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.

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

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

The 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.

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.

The Ministry amended the EC granted vide letter No. J-11015/371/2012-IA. II (M) dated 15.03.2016 w.r.t. production capacity with following additional conditions keeping the other term and conditions same as that of previous EC. The amended in EC was issued vide Lr No J-11015/374/2012-IA. II (M) dated 16.05.2018 wherein the production capacity 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). The additional conditions were also proposed for the project which is as follows keeping the other terms and conditions mentioned in this Ministry's EC letter no J-11015/371/2012-IA. II (M) dated 16.05.2018 same:

- a) Before starting the mining operation, the baseline data with respect to initial levels of mining lease, needs to be ascertained. For this permanent bench marks (BM) needs to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level. The entire river bed should be divided suitably with the help of sections, these sections should preferably run across the flow of the river the inter distance between each section should not be less than 50 meters, the profile of the river should be surveyed along these sections to map the entire area. After establishing the ground truthing of entire lease area in the river bed with the help of aforementioned sections the mining should be carried out in a systematic and scientific manner. The mining lease needs to be re-surveyed after every six months for ascertaining the quantum of extraction. The survey is also required to be done at pre-monsoon and post monsoon period to know the quantity of material replenished.
- b) To submit a detailed methodology for carrying out baseline survey and further replenishment study within one month of date of issue of amendment in EC.
- c) Engage Mining Engineer for overall supervision of mining sites and adequate number of supervisors should be engaged for monitoring of each site.

The Hon'ble NGT in O.A. 23 of 2016 in the matter of Vijay Verma Vs UKFDC & Ors in its order dated 26.02.2018 directed Forest Research Institute (FRI), Dehradun to continue the study and submit its report at the earliest. The FRI submitted its interim report to Hon'ble NGT and the Hon'ble NGT disposed of the case vide its order dated 21.12.2018.

The PP applied under amendment in EC and requested for continuing the mining operation during 2018-19. The PP also submitted the replenishment study report prepared by FRI Dehradun. The proposal was placed in EAC Meeting held during 23-24 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.

It is also informed the Committee regarding Lr No 2519/VII-I/20188(21)/18 dated 5.11.2018 received from Principal Secretary, Govt. of Uttarakhand wherein, it has mentioned that National Mission for Clean Ganga has issued direction under section 5 of EPA, 1986 to State Govt. wherein it has mentioned that " *Ensure that the decision of Uttarakhand Govt. banning mining in Raiwala to Bhogpur stretch of River Ganga in Haridwar is strictly complied and no illegal mining take place in this stretch of river Ganga within the provision of judgment of Hon'ble NGT in the matter O.A No 10/2015 dated 15.04.2015.* The PP submitted that after this letter another letter was issued by NMCG wherein certain information was asked from the PP and they are in process of submitting the same.

Based on the discussion held the Committee **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 9.10.2018 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.

(2.15). Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) from Ganga River Bed located in Shyampur, Shyampur Village of Haridwar District, Uttarakhand by M/s Uttarakhand Forest Development Corporation. [File No:J-11015/368/2012-IA. II(M); Proposal No. IA/UK/MIN/32103/2013] -Amendment in EC Reg.

The Ministry has 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 with proposed production capacity of 308331.42 m³/annum by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village-Shyampur, Tehsil- Haridwar, District-Haridwar, Uttarakhand (MLA: 219.442 ha).

The 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.

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

The Ministry amended the EC granted vide letter No. J-11015/368/2012-IA. II (M) dated 15.03.2016 w.r.t. production capacity keeping other term and conditions same as that of previous EC. The amended in EC was issued vide Lr No J-11015/368/2012-IA. II (M) dated 16.05.2018 wherein the production capacity 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). The additional conditions were also proposed for the project which is as follows keeping the other terms and conditions mentioned in this Ministry's EC letter no J-11015/368/2012-IA. II (M) dated 16.05.2018 same:

- a) Before starting the mining operation, the baseline data with respect to initial levels of mining lease, needs to be ascertained. For this permanent bench marks (BM) needs to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level. The entire river bed should be divided suitably with the help of sections, these sections should preferably run across the flow of the river the inter distance between each section should not be less than 50 meters, the profile of the river should be surveyed along these sections to map the entire area. After establishing the ground truthing of entire lease area in the river bed with the help of aforementioned sections the mining should be carried out in a systematic and scientific manner. The mining lease needs to be re-surveyed after every six months for ascertaining the quantum of extraction. The survey is also required to be done at pre-monsoon and post monsoon period to know the quantity of material replenished.
- b) To submit a detailed methodology for carrying out baseline survey and further replenishment study within one month of date of issue of amendment in EC.
- c) Engage Mining Engineer for overall supervision of mining sites and adequate number of supervisors should be engaged for monitoring of each site.

The Hon'ble NGT in O.A. 23 of 2016 in the matter of Vijay Verma Vs UKFDC & Ors in its order dated 26.02.2018 directed Forest Research Institute (FRI), Dehradun to continue the study and submit its report at the earliest. The FRI submitted its interim report to Hon'ble NGT and the Hon'ble NGT disposed of the case vide its order dated 21.12.2018.

The PP applied under amendment in EC and requested for continuing the mining operation during 2018-19. The PP also submitted the replenishment study report prepared by FRI Dehradun. The proposal was placed in EAC Meeting held during 23-24 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 Member Secretary also informed the Committee regarding Lr No 2519/VII-I/20188(21)/18 dated 5.11.2018 received from Principal Secretary, Govt. of Uttarakhand wherein, it has mentioned that National Mission for Clean Ganga has issued direction under section 5 of EPA, 1986 to State Govt. wherein it has mentioned that " *Ensure that the decision of Uttarakhand Govt. banning mining in Raiwala to Bhogpur stretch of River Ganga in Haridwar is strictly complied and no illegal mining take place in this stretch of river Ganga within the provision of judgment of Hon'ble NGT in the matter O.A No 10/2015 dated 15.04.2015.* The PP submitted that after this letter another letter was issued by NMCG wherein certain information was asked from the PP and they are in process of submitting the same.

Based on the discussion held the Committee **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 9.10.2018 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.

(2.16). Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) for River Bed Mining Project located in Chidiyapur River, Chidiyapur Village of Haridwar District, Uttarakhand by M/s Uttarakhand Forest Development Corporation. [File No: J-11015/369/2012-IA. II(M) Proposal No: IA/UK/MIN/32102/2013]- Amendment in EC

The Ministry has 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 with proposed production capacity of 167829.15 m³/annum by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village-Chidiyapur, Tehsil- Haridwar, District-Haridwar, Uttarakhand (MLA: 325.74 ha).

The 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.

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.

The Ministry amended the EC granted vide letter No. J-11015/369/2012-IA.II (M) dated 15.03.2016 w.r.t. production capacity, keeping other term and conditions same as that of previous EC. The amended in EC was issued vide Lr No J-11015/369/2012-IA.II (M) dated 16.05.2018 wherein the production capacity 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). The additional conditions were also proposed for the project which is as follows keeping the other terms and conditions mentioned in this Ministry's EC letter no J-11015/369/2012-IA. II (M) dated 16.05.2018 same:

- a) Before starting the mining operation, the baseline data with respect to initial levels of mining lease, needs to be ascertained. For this permanent bench marks (BM) needs to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level. The entire river bed should be divided suitably with the help of sections, these sections should preferably run across the flow of the river the inter distance between each section should not be less than 50 meters, the profile of the river should be surveyed along these sections to map the entire area. After establishing the ground truthing of entire lease area in the river bed with the help of aforementioned sections the mining should be carried out in a systematic and scientific manner. The mining lease needs to be re-surveyed after every six months for ascertaining the quantum of extraction. The survey is also required to be done at pre-monsoon and post monsoon period to know the quantity of material replenished.
- b) To submit a detailed methodology for carrying out baseline survey and further replenishment study within one month of date of issue of amendment in EC.
- c) Engage Mining Engineer for overall supervision of mining sites and adequate number of supervisors should be engaged for monitoring of each site.

The Hon'ble NGT in O.A. 23 of 2016 in the matter of Vijay Verma Vs UKFDC & Ors in its order dated 26.02.2018 directed Forest Research Institute (FRI), Dehradun to continue the

study and submit its report at the earliest. The FRI submitted its interim report to Hon'ble NGT and the Hon'ble NGT disposed of the case vide its order dated 21.12.2018.

The PP applied under amendment in EC and requested for continuing the mining operation during 2018-19. The PP also submitted the replenishment study report prepared by FRI Dehradun. The proposal was placed in EAC Meeting held during 23-24 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.

It is also informed the Committee regarding Lr No 2519/VII-I/20188(21)/18 dated 5.11.2018 received from Principal Secretary, Govt. of Uttarakhand wherein, it has mentioned that National Mission for Clean Ganga has issued direction under section 5 of EPA, 1986 to State Govt. wherein it has mentioned that " *Ensure that the decision of Uttarakhand Govt. banning mining in Raiwala to Bhogpur stretch of River Ganga in Haridwar is strictly complied and no illegal mining take place in this stretch of river Ganga within the provision of judgment of Hon'ble NGT in the matter O.A No 10/2015 dated 15.04.2015.* The PP submitted that after this letter another letter was issued by NMCG wherein certain information was asked from the PP and they are in process of submitting the same.

Based on the discussion held the Committee **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 9.10.2018 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.

(2.17). Amendment in Environmental Clearance granted vide Letter No J-11015/372/2012-IA. II (M) dated 25.05.2016 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 Forest Development Corporation, Uttarakhand, located at Villages - Bhogpur, Tatwala and Ramkundi, District-Haridwar, Uttarakhand (MLA 190.57 ha) (Proposal No. IA/UK/MIN/42006/2012)- Amendment in Environmental Clearance.

The Ministry has 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 (ROM) by M/s Uttarakhand Forest Development Corporation, Uttarakhand, located at Villages - Bhogpur, Tatwala and Ramkundi, District- Haridwar, Uttarakhand (MLA 190.57 ha).

The 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.

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.

The Ministry amended the EC granted vide letter No. J-11015/372/2012-IA. II (M) dated 26.05.2016 w.r.t. production capacity with following additional conditions keeping the other term and conditions same as that of previous EC. The amended in EC was issued vide Lr No J-11015/372/2012-IA. II (M) dated 16.05.2018 wherein the production capacity was reduced from **238977.20m³/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). The additional conditions were also proposed for the project which is as follows keeping the other terms and conditions mentioned in this Ministry's EC letter no J-11015/372/2012-IA. II (M) dated 16.05.2018 same:

- a) Before starting the mining operation, the baseline data with respect to initial levels of mining lease, needs to be ascertained. For this permanent bench marks (BM) needs to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level. The entire river bed should be divided suitably with the help of sections, these sections should preferably run across the flow of the river the inter distance between each section should not be less than 50 meters, the profile of the river should be surveyed along these sections to map the entire area. After establishing the ground truthing of entire lease area in the river bed with the help of aforementioned sections the mining should be carried out in a systematic and scientific manner. The mining lease needs to be re-surveyed after every six months for ascertaining the quantum of extraction. The survey is also required to be done at pre-monsoon and post monsoon period to know the quantity of material replenished.

- b) To submit a detailed methodology for carrying out baseline survey and further replenishment study within one month of date of issue of amendment in EC.
- c) Engage Mining Engineer for overall supervision of mining sites and adequate number of supervisors should be engaged for monitoring of each site.

The Hon'ble NGT in O.A. 23 of 2016 in the matter of Vijay Verma Vs UKFDC & Ors in its order dated 26.02.2018 directed Forest Research Institute (FRI), Dehradun to continue the study and submit its report at the earliest. The FRI submitted its interim report to Hon'ble NGT and the Hon'ble NGT disposed of the case vide its order dated 21.12.2018.

The PP applied under amendment in EC and requested for continuing the mining operation during 2018-19. The PP also submitted the replenishment study report prepared by FRI Dehradun. The proposal was placed in EAC Meeting held during 23-24 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 Member Secretary also informed the Committee regarding Lr No 2519/VII-I/20188(21)/18 dated 5.11.2018 received from Principal Secretary, Govt. of Uttarakhand wherein, it has mentioned that National Mission for Clean Ganga has issued direction under section 5 of EPA, 1986 to State Govt. wherein it has mentioned that " *Ensure that the decision of Uttarakhand Govt. banning mining in Raiwala to Bhogpur stretch of River Ganga in Haridwar is strictly complied and no illegal mining take place in this stretch of river Ganga within the provision of judgment of Hon'ble NGT in the matter O.A No 10/2015 dated 15.04.2015.* The PP submitted that after this letter another letter was issued by NMCG wherein certain information was asked from the PP and they are in process of submitting the same.

Based on the discussion held the Committee **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 9.10.2018 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.

(2.18). Amendment in Environmental Clearance granted vide Letter NoJ-11015/374/2012-IA. II (M) dated 15.03.2016 for Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in River Kotawali (a Tributary of River Ganga) with proposed production capacity of 75975.47 m³/annum by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village(s)- Kotawali and Chidyapur, Tehsil- Haridwar, District-

Haridwar, Uttarakhand (MLA: 74.67 ha)- - Amendment in EC.

The Ministry has granted Environmental Clearance vide Letter No J-11015/374/2012-IA. II (M) dated 15.03.2016 for Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in River Kotawali (a Tributary of River Ganga) with proposed production capacity of 75975.47 m³/annum by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village(s)- Kotawali and Chidyapur, Tehsil- Haridwar, District-Haridwar, Uttarakhand (MLA: 74.67 ha).

The 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.

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.

The Ministry amended the EC granted vide letter No. J-11015/374/2012-IA. II (M) dated 15.03.2016 w.r.t. production capacity with following additional conditions keeping the other term and conditions same as that of previous EC. The amended in EC was issued vide Lr No J-11015/374/2012-IA. II (M) dated 16.05.2018 wherein the production capacity was reduced from 75975.47 m³/annum to 17583 m³/annum.

- d) Before starting the mining operation, the baseline data with respect to initial levels of mining lease, needs to be ascertained. For this permanent bench marks (BM) needs to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level. The entire river bed should be divided suitably with the help of sections, these sections should preferably run across the flow of the river the inter distance between each section should not be less than 50 meters, the profile of the river should be surveyed along these sections to map the entire area. After

establishing the ground truthing of entire lease area in the river bed with the help of aforementioned sections the mining should be carried out in a systematic and scientific manner. The mining lease needs to be re-surveyed after every six months for ascertaining the quantum of extraction. The survey is also required to be done at pre-monsoon and post monsoon period to know the quantity of material replenished.

- e) To submit a detailed methodology for carrying out baseline survey and further replenishment study within one month of date of issue of amendment in EC.
- f) Engage Mining Engineer for overall supervision of mining sites and adequate number of supervisors should be engaged for monitoring of each site.

The Hon'ble NGT in O.A. 23 of 2016 in the matter of Vijay Verma Vs UKFDC & Ors in its order dated 26.02.2018 directed Forest Research Institute (FRI), Dehradun to continue the study and submit its report at the earliest. The FRI submitted its interim report to Hon'ble NGT and the Hon'ble NGT disposed of the case vide its order dated 21.12.2018.

The PP applied under amendment in EC and requested for continuing the mining operation during 2018-19. The PP also submitted the replenishment study report prepared by FRI Dehradun. The proposal was placed in EAC Meeting held during 23-24 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 Member Secretary also informed the Committee regarding Lr No 2519/VII-I/20188(21)/18 dated 5.11.2018 received from Principal Secretary, Govt. of Uttarakhand wherein, it has mentioned that National Mission for Clean Ganga has issued direction under section 5 of EPA, 1986 to State Govt. wherein it has mentioned that " *Ensure that the decision of Uttarakhand Govt. banning mining in Raiwala to Bhogpur stretch of River Ganga in Haridwar is strictly complied and no illegal mining take place in this stretch of river Ganga within the provision of judgment of Hon'ble NGT in the matter O.A No 10/2015 dated 15.04.2015.* The PP submitted that after this letter another letter was issued by NMCG wherein certain information was asked from the PP and they are in process of submitting the same.

Based on the discussion held the Committee 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 by them and on submission of clarification sought above by Forest Research Institute. The Committee therefore **deferred** the proposal.

(2.19). Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in Rawasan-1 Located in Rawasan & Mitiveri Villages of Haridwar District, Uttarakhand by M/s Uttarakhand Forest Development Corporation [FileNo.J-11015/367/2012-IA. II(M); Proposal No. IA/UK/MIN/32104/2013]-Amendment in EC

The Ministry has granted Environmental Clearance vide Letter No J-11015/367/2012-IA. II (M) dated 15.03.2016 for Mining of Mineral Sand, Bajri and Boulder (Minor Mineral) in Rawasan-1 River (a Tributary of River Ganga) with proposed production capacity of 495623.69 m³/annum by M/s Uttarakhand Forests Development Corporation, Uttarakhand, located at Village-Rawasan & Mitiveri, Tehsil- Haridwar, District-Haridwar, Uttarakhand (MLA: 99.79 ha).

The 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.

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.

Based on the recommendation of EAC the EC granted vide letter No. J-11015/367/2012-IA. II (M) dated 15.03.2016 w.r.t. production capacity. The Production capacity was reduced from **495623.69 m³/annum to 88651.7 m³/annum** and name of the mineral which is replaced from Sand, Bajri and Boulder (Minor Mineral) to River Bed Material (RBM). The additional conditions were also proposed for the project which is as follows keeping the other terms and conditions mentioned in this Ministry's EC letter no J-11015/367/2012-IA. II (M) dated 16.05.2018 same:

- a) Before starting the mining operation, the baseline data with respect to initial levels of mining lease, needs to be ascertained. For this permanent bench marks (BM) needs

to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level. The entire river bed should be divided suitably with the help of sections, these sections should preferably run across the flow of the river the inter distance between each section should not be less than 50 meters, the profile of the river should be surveyed along these sections to map the entire area. After establishing the ground truthing of entire lease area in the river bed with the help of aforementioned sections the mining should be carried out in a systematic and scientific manner. The mining lease needs to be re-surveyed after every six months for ascertaining the quantum of extraction. The survey is also required to be done at pre-monsoon and post monsoon period to know the quantity of material replenished.

- b) To submit a detailed methodology for carrying out baseline survey and further replenishment study within one month of date of issue of amendment in EC.
- c) Engage Mining Engineer for overall supervision of mining sites and adequate number of supervisors should be engaged for monitoring of each site.

The Hon'ble NGT in O.A. 23 of 2016 in the matter of Vijay Verma Vs UKFDC & Ors in its order dated 26.02.2018 directed Forest Research Institute (FRI), Dehradun to continue the study and submit its report at the earliest. The FRI submitted its interim report to Hon'ble NGT and the Hon'ble NGT disposed of the case vide its order dated 21.12.2018.

The PP applied under amendment in EC and requested for continuing the mining operation during 2018-19. The PP also submitted the replenishment study report prepared by FRI Dehradun. The proposal was placed in EAC Meeting held during 23-24 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 Member Secretary also informed the Committee regarding Lr No 2519/VII-I/20188(21)/18 dated 5.11.2018 received from Principal Secretary, Govt. of Uttrakhand wherein, it has mentioned that National Mission for Clean Ganga has issued direction under section 5 of EPA, 1986 to State Govt. wherein it has mentioned that " *Ensure that the decision of Uttrakhand Govt. banning mining in Raiwala to Bhogpur stretch of River Ganga in Haridwar is strictly complied and no illegal mining take place in this stretch of river Ganga within the provision of judgment of Hon'ble NGT in the matter O.A No 10/2015 dated 15.04.2015.* The PP submitted that after this letter another letter was issued by NMCG wherein certain information was asked from the PP and they are in process of submitting the same.

Based on the discussion held the Committee **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 9.10.2018 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.

Day 2 : January 23, 2019 [Wednesday]

(2.20). Narora Limestone Mine (ML Area 147.940 ha) of M/s. UltraTech Cement Ltd. with Limestone Production Capacity of 1.0 Million TPA (ROM), located at Villages Sonra, Hinauti & Narora, Tehsil Huzur, District Rewa, Madhya Pradesh [File No. J-11015/249/2014-IA.II(M); Proposal No. IA/MIN/MP/24024/2014; Consultant: JM EnviroNet Pvt. Ltd.– Consideration of EC

The proposal of M/s. UltraTech Cement Limited is for Narora Limestone Mine (ML Area: 147.940 ha) with Limestone Production Capacity 1.0 Million TPA, Overburden/Waste -1.2 Million TPA and Soil- 0.3 Million TPA. The mine lease is located at Villages Sonra, Hinauti & Narora, Tehsil Huzur, District Rewa, Madhya Pradesh. The mine lease are falls between Latitude-24°30'20" to 24°31'09" N and Longitude of 81°08'32" to 81°09'48" E. The mine lease area is located of Survey of India toposheet no G44V2 in core zone & G44V2, G44V3, G44V6, G44V7 in buffer zone. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The Terms of references was granted by MoEFCC, New Delhi vide letter no. J-11015/249/2014-IA.II (M) dated 28.10.2014 in favor of M/s. Jai Prakash Associates Limited. Validity of ToR was extended vide letter dated 09.09.2016 which was valid up to 27.10.2017. Thereafter ToR was transferred in the name of UltraTech Cement Limited by MoEFCC, New Delhi vide letter No. J-11015/249/2014-IA.II (M) dated 27.10.2017 and Validity of the TOR was further extended by MoEF&CC from 27.10.2017 to 26.10.2018 vide letter no. J-11015/149/2014-IA.II (M) dated: 27.10.2017. The EIA/EMP Report was submitted online to the Ministry on 25.10.2018 for appraisal after conduction of public hearing on 01.09.2018.

Total Mining Lease Area comprises of 147.940 ha, out of which 146.09 ha area is private land and 1.85 ha is Government land. Initially, the Mining Lease was granted in favor of M/s. Jai Prakash Associates Limited ("JAL") by Mineral Resource Department, Government of Madhya Pradesh vide letter no. F 3-50/2007/12/1, Bhopal dated 22.06.2009. Mining lease was registered on 30.03.2011. Thereafter, some Cement Business of M/s. Jai Prakash Associates Limited ("JAL") and Jaypee Cement Corporation Ltd. ("JCCL") was transferred to UltraTech Cement Ltd (UTCL) by National company Law Tribunal Bench (NCLTB) at Mumbai on 15.02.2017 in case of UTCL and NCLTB at Allahabad on 02.03.2017 in case of Sellers. Accordingly, the Mining Lease has been transferred to M/s. UltraTech Cement Limited by Mineral Resource Department, Government of Madhya

Pradesh vide order no. F-3-50/2007/12/1 dated 25.05.2017 and same has been registered on 23.08.2017 and executed with effect from 10.08.2017 which is valid upto 29.03.2041. Mining lease is valid upto 29.03.2061 as per section 8 (A) (3) of Mines and Minerals (Development & Regulation) Amendment Act, 2015.

The Mining Plan along with Progressive Mine Closure Plan vide letter no. 314(3)/2008-MCCM(C)/MP-48 dated 26.03.2009 over an mine lease area of 147.940ha in the name of M/s Jaiprakash Associates Limited has been approved by The Controller of Mines (CZ), Indian Bureau of Mines (IBM), Nagpur. Further the mine lease was transferred from M/s Jaiprakash Associates Limited to M/s Ultra Tech Cement Limited; PP did not obtained transferred the Mine plan in the name of M/s UltraTech cement Limited.

PP reported that No forest land falls within the lease area. Letter regarding the same has been obtained from Forest Department vide letter no. Ma.Chi. / 3154 dated 04.08.2018. There is no National Park, Wildlife Sanctuary, and Biosphere Reserve, Wildlife Corridors, Tiger/Elephant Reserves etc. exist within 10 km radius of the Mine site. Letter showing the same has been obtained from Forest Department vide letter no. Ma.Chi/ 3154 dated 04.08.2018. No Protected Forest is found within 10 radius study area, Santhari Reserved Forest exist within the study area. No schedule I & II species (according to Wildlife Protection Act, 1972) is found in the study area. The Mining Lease Area is located in Madhya Pradesh District hence Project area does not fall under Aravali range.

PP reported that opencast fully mechanized method of mining will be carried out by deploying Heavy Earth Moving Machineries. The mine working will involve removal of overburden soil (OBS) & Upper Magnesian Shale (UMS) to expose upper grey limestone (UGL). Drilling will be carried out by drilling 6-8 m deep hole. Controlled blasting will be adopted with the use of ANFO and/or Column Charge (Slurry Explosives) and booster charge. Loading operations will be carried out by hydraulic excavators. Limestone will be crushed in the crusher installed at Plant Site of the company. After primary crushing; mineral will be used captive purpose in the company's Bela cement plant. Transportation of limestone from working face to crusher hopper will be carried out by dumpers. At end of the 5th year of mining plan, total 761452 cubic meter top soil will be generated. The scrapped top soil will be used for spreading and onward plantation activity. At the end of life of mine, total 7.138 million cum waste will be generated. Total generated Waste will be backfilled into the mined out area and later it will be stabilized by the plantation. There will be no waste dump at the end of life of mine. Total water requirement will be 90 KLD which will be sourced initially from mine sump of the adjacent mine and later from rain water accumulated in the mine sump of this mine as and when developed. Total existing manpower will be utilized for the proposed mining project. Total power requirement for the limestone mining project will be 150 KW (for mine lighting and illumination) which will be sourced from captive power plant and MPSEB grid.

PP reported that at the conceptual stage, out of the total lease area (i.e. 147.940 ha), mined out area will be 133.94 ha, out of which, 97.51 ha area will be covered under backfilling followed by plantation. About 36.43 ha area will be converted into water reservoir. 2.0 ha area will be covered under infrastructure. An area of 4.0 ha will remain

undisturbed. Total 105.51 ha area (97.51 ha on backfilled area and 8.0 ha area by 7.5 meter barrier zone) will be covered under Green belt and Plantation. The plantation will be done @2500 saplings per ha of land.

The primary baseline data for site specific micro meteorology data, ambient air quality, water quality, noise level, soil and flora & fauna was collected during Post Monsoon Season (October to December, 2017). The baseline monitoring results of ambient air, soil, ambient noise level and ground water have been reported and the same were compared with respective prescribed standards viz. NAAQS-2009 (for air monitoring), IS:10500-2012 (for surface water & ground water) and ambient noise limits prescribed by CPCB. Concentrations of PM10 and PM2.5 for all the 8 AAQM stations were found between 60.8 to 83.4 $\mu\text{g}/\text{m}^3$ and 25.9 to 50.7 $\mu\text{g}/\text{m}^3$ respectively. The concentrations of SO2 and NO2 were found to be in range of 6.2 to 13.5 $\mu\text{g}/\text{m}^3$ and 11.3 to 21.6 $\mu\text{g}/\text{m}^3$, respectively. Noise levels vary from 49.3 to 60.4 Leq dB (A) during day time and from 41.2 to 48.3 Leq dB (A) during night time and are within the respective ambient noise limits. The analysis result for soil shows that soil is neutral to slightly alkaline in nature and soil texture is silty clay loam. The impact prediction carried through modeling indicated maximum incremental concentrations w.r.t. PM10 is 1.02 $\mu\text{g}/\text{m}^3$, PM2.5 is 0.31 $\mu\text{g}/\text{m}^3$, SO2 is 2.13 $\mu\text{g}/\text{m}^3$ & No2 is 0.10 $\mu\text{g}/\text{m}^3$.

Public hearing was conducted on 01.09.2018 at 11.30 AM at Government Primary School at Village-Sonara, Tehsil- Huzur, District- Rewa. The proceeding was chaired by Mr. B.K. Pandey- Additional Collector, Representative of Collector and Mr. Sanjeev Kumar Mehra, Regional Officer, Madhya Pradesh State Pollution Control Board, Rewa. Company has been earmarked Rs. 50 lac under Corporate Environment Responsibility (CER) in compliance of MoEFCC OM dated 01.05.2018 for issues raised during public hearing like Education, Health, Infrastructure, Skill Development and others. Total cost of the Project is Rs. 20 Crores/-. Capital Cost for Environmental Protection Measures is Rs. 45 Lakh/- & Recurring cost is Rs. 25 Lakh per annum. No litigation is pending against this project.

After detailed deliberations, **the Committee is of the view that since the mine lease has been transferred from M/s Jaiprakash Associates Limited to M/s Ultra Tech Cement Limited, accordingly the Mining Plan along with Progressive Mine Closure Plan dated 26.03.2009 should also be transferred in the name of M/s Ultra Tech Cement Limited. However, the PP has not transferred the Mining Plan along with Progressive Mine Closure Plan in the name of M/s Ultra Tech Cement Limited, and conducted the Public hearing without transfer of Mine plan in the name of M/s UltraTech Cement Limited. The Committee noted that the Public Hearing has been conducted based on the mine plan in favor of M/s Jaiprakash Associates Limited.**

The Committee also noted that there are excavated Pits in the mine lease area, However PP mentioned that the said mine lease area is new mine lease area the same was carried illegally before grant of the mine lease area, Hence the committee is of view that the PP may submit the Letter from DMG to the effect that no mining has been carried out

by the PP in this area.

The Committee is therefore **returned the proposal in the present** form and is of the view that PP needs to first resolve the above mentioned issues.

(2.21). Expansion of Rajashree Limestone Mine No. 2 (ML Area 400.70 ha) for increase in limestone Production Capacity from 0.45 MTPA to 1.0 MTPA & installation of 400 TPH crusher in the mining lease area located at Village – Basni, Tehsil– Merta, District– Nagaur (Rajasthan) by M/s Ultra Tech Cement Ltd. [File No. J-11015/391/2014-IA-II (M); Proposal No. IA/RJ/MIN/25414/2014; Consultant: JM EnviroNet Pvt. Ltd.] – Reg. Environmental Clearance.

The proposal of M/s Ultra Tech Cement Ltd. is for Expansion of limestone Production Capacity from 0.45 MTPA to 1.0 MTPA & installation of 400 TPH crusher of Rajashree Limestone Mine No. 2 (ML Area 400.70 ha). The mine is located in Village – Basni, Tehsil– Merta, District– Nagaur (Rajasthan). The mine area is apart of the Survey of India Topo sheet No 45F/14 bounded by Latitude 26 0 34' 58.88" N to 26 0 36' 32.06" N and longitude 73° 47' 6.38" E to 73° 49' 16.02" E. The project falls under Schedule 1(a) of mining and is a Category- "A" project as per EIA notification 14th September 2006. As the lease area is greater than 100 Ha. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The PP vide proposal No IA/RJ/MIN/25414/2014 applied online for grant of ToR on 02.10.2014 and submitted Form-1 and Pre-Feasibility Report. The proposal was considered in EAC meeting held on April 29-30, 2015 wherein the Committee recommended for grant of ToR for expansion of production from 0.101 MTPA to 0.50 MTPA (0.71 MTPA ROM) from Mining lease area 103.53 Ha. The ToR was issued vide Lr. No. J J-11015/391/2014-IA-II (M) dated 08.06.2015. The ToR was valid till 07.06.2018 and PP applied for grant of EC vide proposal No IA/RJ/MIN/25414/2014. The Ministry sought essential details from PP on 12.10.2018, 04.05.2018 & 09.10.2018 and the PP replied the same on 25.04.2018, 25.09.2018 & 29.11.2018 respectively. The Proposal for EC is now placed in EAC Meeting held during January 22-23, 2019.

The PP reported that initially mining lease (for larger area) was granted in favor of M/s. RSMM Ltd. on 29.10.1986, then transferred to M/s. Indian Rayon Industries Ltd. by the State Govt. vide order no. P.41 / 24 / Mine / Group–2/85 dated 30.06.1987. PP submitted that the first renewal of the lease was granted by the State Govt. for a period of 20 years from 29.10.1996 till 28.10.2016. PP submitted that lease was then transferred to M/s. Grasim Industries Ltd. on 01.07.2002. The PP submitted letter no. सखअ/गोटन/एम.एल.3/95/181 dated 29.08.2018 issued from Directorate of Mines and Geology, Gotan, Govt. of Rajasthan wherein it has mentioned that the State Government has approved the proposal of transfer of mining lease from M/s. Grasim Industries Ltd to M/s. UltraTech Cement Ltd. vide order dated 26.06.2018, deed was executed on 23.08.2018 and registered on 23.08.2018. PP

submitted that as per the provision of MMDR Act, 2015, the mining lease has been deemed extended further up to 31st March, 2030. A formal letter to this effect has also been issued in the name of M/s. Grasim Industries Ltd. by the Assistant Mining Engineer, Directorate of Mines and Geology, Gotan, Govt. of Rajasthan, vide letter no. AME/GOTAN/CC.I/M.L. 3/95/135 dated 18.03.2015. The validity of lease period of M/s. Grasim Industries Ltd. has been further extended upto year 2036 vide letter no. AME/GOTAN/CC I/ML 3/95/986 issued by Assistant Mining Engineer, Directorate of Mines and Geology, Gotan, Govt. of Rajasthan. PP submitted that Environmental Clearance for existing limestone production capacity of 0.45 MTPA was granted by MoEF, New Delhi vide Letter No. J-11015/15/2005- IA. II (M) dated 17th November, 2005.

The PP submitted that Modified Mining Plan has been prepared as per rule 17(3) of MCR, 2016 including Progressive Mine Closure Plan under rule 23B of MCDR, 1988 and the same has been approved in the name of M/s Ultra Tech Cement Ltd (Unit Birla White) vide letter no. 584(4)(3) (1634)/2015RCM-AJM/ 680 dated 8th June, 2016 under MCDR 1988/MCR, 1960.

Observation of EAC: On perusal of the mining plan submitted by the PP the Committee observed that in situ tentative excavation table mentioned at page no 55-56 of the approved modified mining plan does not provide the complete insight on year-wise total excavation. Thus, PP needs to submit the complete material balance (flow chart & tabular format) from initial excavation to final dispatch from the mines. The Committee also observed that production achieved mentioned in mining plan is not matching with the past production details certified by the DMG. The reason for submission of wrong information to IBM and reason for variation needs to be submitted.

PP submitted that the method of mining shall be opencast semi-mechanized forming benches 3m-6m in height and maintaining an overall pit slope of 45° or less by using drilling and blasting. PP submitted that width of the working benches will always be maintained at least 20 m for safe, easy and convenient movement of mining machinery. PP submitted that the excavation of the overburden zone will be done by drilling 100 mm diameters holes by wagon drill machine and blasting and excavation of the ore zone will be done by drilling 34 mm diameter holes by jack hammer machine and blasting. In both the cases, blasting will be done by use of suitable explosives. PP submitted that the production of White cement grade limes tone (WCG) lime stone will be loaded by JCB on the trucks and part of it will be sent to the crusher located in the lease area and crushed material from crusher and the remaining WCG limestone from the pit will be sent to the white cement plant by road on trucks. The ROM obtained from the non- white cement grade (NWCG) limestone band will be loaded by JCB on trucks and will be sent to the crusher located in the lease area and crushed and screened for recovery of WCG lime stone. The WCG limes tone recovered from the crusher will be dispatched to the cement plant by road. PP submitted that the waste material generated from the OB zone will be loaded on dumpers by shovels and will be dumped in the exhausted part of the pits for backfilling. The waste generated from ore zone will be loaded on dumpers by JCB and will be dumped on the proposed site during 2016- 17 & 2017- 18 and then from 2018- 19 and onwards backfilled in the exhausted part of the pits for backfilling.

Observation of EAC: The Committee observed that PP has proposed to use the Jackhammer drills for drilling in limestone. The Jackhammer drills have high noise levels and do not have inbuilt water injection system. Thus, PP needs to re-look into the drilling & blasting parameter in ore and machine used for the same. PP needs to submit the protective measure to be taken to reduce noise and dust emission due to drilling & blasting activity.

Conceptual Stage: At the end of lease period out of the total mining lease area (i.e. 400.70ha), total mined-out area will be around 130.34 ha; out of which 66.41 ha area will be reclaimed and backfilled followed by plantation and remaining 63.93 ha area will be converted into water reservoir. Greenbelt /plantation will be developed on 135.21 ha area (66.41 ha backfilled and 68.80 ha virgin area).

Observation of EAC: The Committee observed that progress in plantation and green belt development is not upto the mark. The Committee also noted that previously also the EAC for some other mining lease of the UltraTech noticed that the plantation is not up to the mark. But it seems that commitment from the top management is lacking somewhere. Thus, the Committee is of the view that PP should provide the list of all the mining lease held by UltraTech along with their KML file and status of green belt development and plantation carried out so far.

Groundwater Table & Water Demand: PP submitted that the total water requirement for the proposed expansion will be 19.5 KLD (5 KLD for Dust suppression on mine roads – 6 m wide, 2 KLD for dust suppression at loading point, 0.5 KLD for drinking, 9 KLD for greenbelt development and plantation on the backfilled area, 3 KLD for bathrooms, washrooms and toilets etc.) which will be fetched from the nearby villages and mine sump as and when developed. PP submitted that there is no need of clearance as water will be sourced from the nearby villages and mine sump as and when developed. PP submitted that elevation range is 300-323 mRL, general ground level is 320 MRL and ground water table is 145- 135 m bgl (175- 185 m RL). PP submitted that the ultimate working depth shall be 37 m bgl (283 m RL) which will be about 98 m above the ground water table. Thus, water table will not get intersected due to mining activities. PP submitted that garland drains will be provided all around the excavation to prevent flow of surface rainwater and from surrounding areas in the working pit. The drains shall be lined with stone masonry and shall be of adequate size to carry the storm water without overflow. The rain water which will get accumulated in working pit will be pumped out by diesel pump of adequate capacity. The rainwater collected in the excavated out area or in mine sump shall be collected and utilized for water spraying on haul roads and other dust prone areas. PP submitted that waste water generated at mine office shall be passed through oil-grease separator and the treated water is recycled /utilized for dust suppression.

Comment of EAC: The PP has submitted that water will be sourced from nearby villages and mine sump as and when developed. Committee observed that it is an existing mines and PP is fulfilling its water requirement from some or other water source. The statement made by PP shows that PP is still not clear about the source of water. Thus, PP should

clearly bring out the source of water for this mining project and whether the PP has obtained NOC from Gram Panchayat for withdrawal of water or not. In addition to this, PP should submit justify the water requirement, measures to be adopted for optimized use of water available, submit water balance cycle, location of workshop & oil grease trap, type of water tanker used, route for transportation, length of road where water spraying will be done, requirement of water in crusher & screening plant etc.

Plantation: The PP submitted that greenbelt /plantation will be developed on 135.21 ha area (66.41 ha backfilled and 68.80 ha virgin area). Around 202815 saplings (99615 on backfilled area and 103200 on virgin area) will be planted till the end of life of mine. PP submitted that 1500 saplings of Albizia lebbeck, Albizia procera, Azadirachta indica, Melia azadirach, Dalbergia sisoo, Pongamia pinnata, Buteafron dosa, Musa paradisiaca, Ziziphus mauritiana, Citruslimon, Punicagranatum, Syzygiumcumini, Arto carpus heterophyllus , Phyllanthuemblica, Psidiumguajava and Annona squamosa etc. shall be will be planted per hectare of land.

Observation of EAC: The Committee is of the view that it appears from the KML file & survival rate (58%) that serious efforts were not taken by the PP for development of the green belt and plantation. Thus, Committee is of the view that PP should submit a) detailed plan in tabular format (year-wise for 30 years/life of mine whichever is earlier) for afforestation and green belt development in and around the mining lease area. The PP should submit the number of saplings to be planted, area to be covered under afforestation & green belt, 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 30 years) 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 and b) the PP has proposed for backfilling thus, PP should provide the area of the mining lease backfilled so far and proposal for the remaining period in tabular format with timeline, amount of material to backfilled, time period by which backfilled area will be reclaimed completely.

Forest Land & Applicability of General Condition: PP submitted that there is no forest area involved in the mining lease area. PP has submitted a letter no. F () Survey/DFC/2015-16/6399 dated 06.11.2015 issued from Deputy Forest Conservator, Nagaur wherein it has mentioned that the lease area does not fall under the forest or plantation area and is approx 7km away from the forest nursery Lamabajata and approx 2km away from the old plantation area. PP has submitted that No National Parks, Wildlife Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/ Elephant Reserves (existing or proposed) etc. falls within 10 km of the mining lease area. PP submitted that The M.L. Area exists in Nagaur District of Rajasthan. Therefore, does not fall in Coastal Regulation Zone (CRZ). The project does not come under 'Critically Polluted Area' as per CEPI by CPCB. PP submitted that the mine lease area does not fall under 'Aravalli Range' as certified by Assistant mineral engineer, Department of Mines and Geology, Gotan vide letter no. AME/GOTAN/CC/MAJOR/ML 03/1995/362 dated 7th Sept. 2015.

Schedule-1 Species & Wildlife Conservation Plan: The PP submitted that there is No Schedule- I species (according to Wildlife Protection Act, 1972) was found in the study area during survey. PP has submitted Authenticated List of flora and fauna separately for core and buffer zone has been authenticated from Deputy Conservator of Forests, Nagaur, vide no. F () Survey/DCF/2015-16/6340 dated 04.11.2015.

District Survey Report: The limestone in the instant case is a major mineral and requirement of District Survey Report (DSR) is not applicable in the instant case.

Baseline Data: PP reported that One season primary baseline data for ambient air quality (as per CPCB Notification, 2009), water quality, noise level, soil and flora and fauna has been collected during Summer Season (March to May, 2015).

Observation of EAC: The Committee observed that although the PP has applied within the validity of ToR but the base line data collected is quite old and PP should collect at least one-month baseline data for consideration of the project. The air quality modeling has been carried out for production of 1.0 Million Tonne of limestone but there is also excavation of waste an installation of 400 TPH Crusher. The Committee thus of the view that PP should calculate the emission rate of all the activities contributing to air pollution, air quality modeling should be for total excavation, both controlled and worst case scenarios needs to be presented, GLC values of PM₁₀, PM_{2.5}, SOx & NOx needs to be submitted. For the transportation of mineral impact zone on both the side of the road needs to be provided along with isopleth, in case of transportation of the mineral on the road having agricultural fields on its either side then impact on the same needs to be accessed and provision for compensation in case damage to the crop need to be submitted.

Court Case/Litigation: PP reported that there is no court case/ litigation pending against the project.

Public Hearing: Public hearing for the project was conducted on 18.03.2017 at Upkhand Karyalaya, Merta city, Tehsil Merta, District Nagaur at 11:00 A.M. PP submitted that the proceeding was chaired by Mr. Chandagiram Jhajhdiya, Additional District Collector, Nagaur. PP submitted that the advertisement for public hearing was published in '*Dainik Navjyoti*' (15.02.2017) and '*Dainik Bhaskar*' (15.02.2017). The Committee deliberated on the issues raised during the public hearing and the major issued raised by the local people were related to blasting practices, employment, women empowerment, education, air pollution from haul road, disposal of overburden, electricity supply to locals, admission to local village children in company school, health issues of human and animals, drop of water table, , land acquisition & compensation issues, mining on fertile land, and safety issues of workers. The PP submitted that around 1711.29 lakh has been earmarked for CSR activities under Education, Health & Family Welfare, Sustainable Rural Livelihood, Social Welfare Issue, Infrastructural Development and other miscellaneous activities for next four years. An amount of Rs. 19.35 lakhs have been earmarked for sustainable development for four years under CSR. Capital cost for EMP has been earmarked as Rs 1.1 Crore/annum with annual Recurring cost of Rs. 0.41 Crore. Blasting is being and will be carried out as per Approved

Modified Mining Plan and guidelines laid under DGMS. An amount of Rs. 19.35 lakh has been allotted for Sustainable Rural Livelihood for next four years. An amount of Rs 763.34 lakhs has been earmarked for Education under CSR activities for next four years etc.

Observation of EAC: The Committee observed that there is dis-satisfaction in the persons attended the public hearing for expansion of the project. Some of the facts are very shocking in nature like engaging children into blasting practices, the representative of the company has mentioned during the PH & EAC meeting that blasting practice is being executed by 3 blasters as well as 4 mining foreman. The PP in its presentation provided the details of the Statutory manpower engaged in the mine but there is no mention of blaster in the same. Further, in the employment detail mentioned in the mining plan there is no mention of blaster. This shows lack of seriousness of the company in preparing legal documents such as mining plan. Thus, Committee is of the view that PP first submit the compliance of commitment made during previous public hearing. In addition to this each and every issue raised by local's villagers needs to be addressed with proper budget allocation and strict timeline for implementation of the same. The PP should submit a letter from Regional Office of DGMS which proves that company has engaged competent persons as per MMR, 1961 viz. Mines Manager, Blaster, foreman etc., details of the last inspection made by DGMS & IBM needs to be submitted.

Corporate Environment Responsibility (CER): The PP did not mention about the CER in the EIA Report however in the presentation made during the meeting the budget under CER is mentioned as 49.5 Lakh which includes i) installation of 5 KW solar power plant & supply line with LED light (Rs 30) lakh, ii) Women Empowerment (Rs 4.0 Lakh) and iii) Providing furniture (Rs 1.35 lakh) , computers (2.5 lakh) , drinking water facilities (1.0 Lakh) , stationary to students (0.65 Lakh) , and renovation work (Rs 10.0 Lakh) at Govt School of Village Basni cheja.

Observation of EAC: The Committee observed that activities proposed in the CER has already been complied then what is the proposal for the future. Thus PP needs to submit the activity wise, time bound CER Plan along with budgetary allocation considering the present and further need of the local people and issues raised during public hearing.

RO Compliance: PP has submitted that Compliance report of conditions stipulated in Environmental Clearance has been certified by Regional Office, MOEFCC, Lucknow vide Lr. No. IV/ENV/R/Mine-Z60/383/2005/745 dated 24.08.2015.

Observation of EAC: The Committee observed that although there is no major non-compliance reported in the RO Compliance Report but as the report is almost three-year-old.

R & R Plan: PP Submitted that there is no any active dump outside lease area, hence no R&R issues involved.

The Project Proponent submitted that the budget earmarked for Environmental Management Plan (EMP) shall be ₹ 1.1 Crore (Capital) & ₹ 0.41 Crore (Recurring) which include [for Pollution Control ₹ 11 Lakh (Capital) & ₹ 11 Lakh (Recurring), for Pollution Monitoring ₹ 6.7 Lakh (Capital) & ₹ 5.2 Lakh (Recurring), for Occupational Health ₹ 2.8 Lakh (Capital) & ₹ 2.8 Lakh (Recurring), for Green Belt/Mine/Township ₹ 1.0 Lakh (Capital) & ₹ 6.0 Lakh (Recurring), for Reclamation / Rehabilitation of mined out area ₹ 78.5 Lakh (Capital) & ₹ 8.0 Lakh (Recurring), for Others (specify) –Afforestation Fencing and Safety Zone ₹ 10.0 Lakh (Capital) & ₹ 8.5 Lakh (Recurring)].

Observation of EAC: In the EMP, PP has not addressed the fugitive emission from the crusher and screening plant, the Committee also observed that although PP has proposed pre & post-employment health checkup but activity wise time bound budget for the same is not explicitly mentioned, the Committee also observed that Ministry has finalized the Standard EC conditions for non-coal mining projects and PP should prepare the activities and budget allocation in line with the Standard EC Conditions. The clear time line activity wise for the activities proposed in EMP needs to be submitted with budgetary allocation.

The Project Proponent submitted that the total project cost shall be ₹ 10 Crore (Capital) and shall give total employment to 39 persons.

Observation of the EAC: The PP has provided only capital cost of the project what about the recurring cost. Thus, details of the same needs to be provided. The PP should revise the cost of project based on the different activities proposed for this project.

Undertaking from PP & Consultant: The PP has submitted the disclosure of the consultant wherein it has mentioned that the J.M. EnviroNet Pvt. Ltd. who has been is accredited with IS O-9001: 2008 for EIA Division. EIA Division is also approved by National Accreditation Board for Education & Training (NABET) formerly NRBPT (Quality Council of India), Certificate no. NABET/E IA/1013/002 dated 17th May 2010.

Observation of EAC: The PP & Consultant should give an undertaking that EIA/EMP Report and all documents submitted in this regard to the Ministry are factually correct and PP & Consultant are fully responsible for the same. The Committee observed that as the PP has applied earlier online Form-II was not submitted. There is a requirement of submission of Form-II after the issuance of O.M. No. 22-8/2018 IA.III (M) dated 20.04.2018 but in the instant case PP is required to submit the same.

The PP has submitted undertaking for the compliance of Common Cause Order dated 02.08.2017 & other Statutory requirement in pursuant to Ministry's O.M dated 30.05.2018

Observation of EAC: The PP should approach State Government in case any violation of Common Cause Order dated 02.08.2017 for raising the demand if any. The Committee also requested the Ministry to examine the matter in light of Common Cause Order dated 02.08.2017 and S.O. 804(E) dated 14.03.2017 for any violation.

Based on the discussion held and documents submitted by the PP, the Committee deliberated the proposal and **returned the proposal in present form** so that PP can apply in Form-II along with following information:

- a) On perusal of the mining plan submitted by the PP the Committee observed that in-situ tentative excavation table mentioned at page no 55-56 of the approved modified mining plan does not provide the complete insight on year-wise total excavation. Thus, PP needs to submit the complete material balance (flow chart & tabular format) from initial excavation to final dispatch from this mining lease. The Committee also observed that production achieved mentioned in mining plan is not matching with the past production details certified by the DMG. The reason for submission of wrong information to IBM and reason for variation needs to be submitted.
- b) The Committee observed that PP has proposed to use the Jackhammer drills for drilling in limestone. The Jackhammer drills have high noise levels and do not have inbuilt water injection system. Thus, PP needs to re-look into the drilling & blasting parameter and machine used for limestone drilling. PP needs to submit the protective measure to be taken to reduce noise and dust emission due to drilling activity.
- c) The Committee observed that progress in plantation and green belt development is not upto the mark on viewing the KML file. The survival rate is also very poor (58%). The previous EAC in some other project of M/s UltraTech Limited noticed that the plantation is not up to the mark. But it seems that commitment from the top management is lacking somewhere. Thus, the Committee is of the view that PP should provide the list of all the mining lease held by UltraTech along with their KML file and status of green belt development and plantation carried out so far.
- d) The Committee is of the view that it appears from the KML file & survival rate (58%) that serious efforts were not taken by the PP for development of the green belt and plantation. Thus, Committee is of the view that PP should submit a) detailed plan in tabular format (year-wise for 30 years/life of mine whichever is earlier) for afforestation and green belt development in and around the mining lease area. The PP should submit the number of saplings to be planted, area to be covered under afforestation & green belt, 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 30 years) 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 and b) the PP has proposed for backfilling thus, PP should provide the area of the mining lease backfilled so far and proposal for the remaining period in tabular format with timeline, amount of material to backfilled, time period by which backfilled area will be reclaimed completely.

- e) PP should clearly bring out the source of water for this mining project and whether the PP has obtained NOC from Gram Panchayat for withdrawal of water or not. In addition to this, PP should justify the water requirement, measures to be adopted for optimize use of available water, submit water balance cycle, location of workshop & oil grease trap, type of water tanker used, route for transportation, length of road where water spraying will be done, requirement of water in crusher & screening plant etc.
- f)The Committee observed that although the PP has applied within the validity of ToR but the base line data collected is quite old and PP should collect at least one-month fresh baseline data for consideration of the project. The air quality modeling has been carried out for production of 1.0 Million Tonne of limestone but there is also excavation of waste an installation of 400 TPH Crusher. The Committee thus of the view that PP should calculate the emission rate of all the activities contributing to air pollution, air quality modeling should be for total excavation, both controlled and worst case scenarios needs to be presented, GLC values of PM10, PM2.5, SOx & NOx needs to be submitted. For the transportation of mineral impact zone on both the side of the road needs to be provided along with isopleth, in case of transportation of the mineral on the road having agricultural fields on its either side then impact on the same needs to be accessed and provision for compensation in case damage to the crop need to be submitted.
- g) The Committee observed that there is dis-satisfaction in the persons attended the public hearing for expansion of the project. Some of the facts are very shocking in nature like engaging children into blasting practices, the representative of the company has mentioned during the PH & EAC meeting that blasting practice is being executed by 3 blasters as well as 4 mining foreman. The PP in its presentation provided the details of the Statutory manpower engaged in the mine but there is no mention of blaster in the same. Further, in the employment detail mentioned in the approved modified mining plan there is no mention of the blaster and even mines manager. This shows lack of seriousness of the company in preparing legal documents such as mining plan. Thus, Committee is of the view that PP first submit the compliance of commitment made during previous public hearing. In addition to this each and every issue raised by local's villagers needs to be addressed with proper budget allocation and strict timeline for implementation of the same. The PP should submit a letter from Regional Office of DGMS which proves that company has engaged competent persons as per MMR, 1961 viz. Mines Manager, Blaster, foreman etc., details of the last inspection made by DGMS & IBM needs to be submitted.
- f)The Committee observed that activities proposed in the CER has already been complied then what is the proposal for the future. Thus PP needs to submit the activity wise, time bound CER Plan along with budgetary allocation considering the present and further need of the local people and issues raised during public hearing.

- h) The Committee observed that although there is no major non-compliance reported in the RO Compliance Report but as the report is almost three-year-old.
- i) In the EMP, PP has not addressed the fugitive emission from the crusher and screening plant, the Committee also observed that although PP has proposed pre & post-employment health check-up but activity wise time bound budget for the same is not explicitly mentioned, the Committee also observed that Ministry has finalized the Standard EC conditions for non-coal mining projects and PP should prepare the activities and budget allocation in line with the Standard EC Conditions. The clear time line activity wise for the activities proposed in EMP needs to be submitted with budgetary allocation.
- j) The PP has provided only capital cost of the project what about the recurring cost. Thus, details of the same needs to be provided. The PP should revise the cost of project based on the different activities proposed for this project.
- k) The PP & Consultant should give an undertaking that EIA/EMP Report and all documents submitted in this regard to the Ministry are factually correct and PP & Consultant are fully responsible for the same. The Committee observed that as the PP has applied earlier online Form-II was not submitted.
- l) The PP should approach State Government in case any violation of Common Cause Order dated 02.08.2017 for raising the demand if any. The Committee also requested the Ministry to examine the matter in light of Common Cause Order dated 02.08.2017 and S.O. 804(E) dated 14.03.2017 for any violation.

(2.22). Mining of Boulder, Gravel and Sand Minor Minerals at Rattewali Block/PKL B 10 over an area of 45.00 ha, with production capacity of 19,00,000 TPA located at Village- Rattewali, Tehsil- Barwala District- Panchkula, Haryana by M/s Tirupati Roadways (File No: J-11015/75/2017-IA-II (M); Proposal No IA/HR/MIN/66257/2017; Consultant:Enkay Enviro Services Pvt. Ltd)-Consideration of EC

The proposal of M/s Tirupati Roadways is for production of 19,00,000 TPA M/s Tirupati Roadways from "Rattewali Block/PKL B 10" in Dudgarh River Bed having mining lease area of 45.0 Ha located at Village- Rattewali, Tehsil- Barwala District- Panchkula, Haryana. The mine lease area falls in the Survey of India Topo-Sheet No. H43K14 & H43L2. The latitudes and longitudes of the Mine lease fall between Latitude: - N 30° 38' 33" to N 30° 39' 24.6 " and Longitude: - E 76° 59' 17.50" to E 76° 50' 00.00". As per EIA Notification dated 14th September, 2006 as amended from time to time, the project falls under Category "B1", Project as the mining lease area is less than 100 Ha. Further, as per EIA notification, 2006, "Any project or activity specified in Category 'B' is treated as Category 'A', if located in whole or in part within 5 km from the boundary of (i) Protected Areas notified under the Wild Life (Protection) Act, 1972, (ii) Critically Polluted areas as notified by the Central Pollution Control Board from time to time, (iii) Notified Eco-sensitive

areas, (iv) inter-State boundaries and international boundaries". In the instant case the Khol Hai Raitan Wildlife Sanctuary is within 1.98 km from the mine lease boundary and thus the project was considered as Category 'A' project in the Ministry. Further, as per S.O.3977 (E) dated 14.08.2018 the general condition is not applicable for B1 category project in cluster. The SEIAA Haryana is not functional and due to this the proposal is considered in the Ministry.

The Project Proponent applied online vide proposal no IA/HR/MIN/66257/2017 on 18.07.2017 for prescribing Term of Reference (ToR) and submitted the Form-1 and Pre-Feasibility report. The proposal was considered & recommended for prescribing Term of Reference (ToR) in EAC Meeting held on 29-30 August, 2017 and ToR was issued on 14.09.2017. The Project Proponent applied vide proposal No. IA/HR/MIN/66257/2017 for grant of EC online on 27.04.2018 and submitted the EIA Report after conducting the Public Hearing. The proposal was placed in EAC Meeting held on 14-15 May, 2018, wherein, the Committee **returned** the proposal in present form due to shortcomings. The PP now applied online vide proposal no. IA/HR/MIN/66257/2017 dated 30.11.2018 for grant of EC and the proposal is now placed in the EAC meeting held during 22-23, January 2019.

The proponent mentioned that the LOI over an area of 45.0 ha of Mining lease has been granted by the Director General, Department of Mines & Geology, Haryana vide memo no.- DMG/ HY/ Cont/ Rattewali Block/ PKL B 10/ 2017/ 2658 dated 16.06.2017 for a period of 7 years. The lease area lies on riverbed of Dudgarh in District Panchkula (Haryana). The PP submitted that Mining Plan and Progressive Mine Closure Plan of this proposed mining lease area is approved by Director General of Mines and Geology Department vide memo no. DMG/HY/MP/Rattewali Block/PKL/B-10/2017/405 on dated 24/01/2018 with production capacity of 19, 00,000 Tonne and thereafter as per direction of EAC PP prepared the Modified Mining Plan including Progressive Mine Closure Plan for 19,00,000 TPA at get it approved by the Office of State Mining Engineer, Director Mines & Geology, Haryana vide Memo no. DMG/ HY/ MP/ Rattewali Block/ PKL B – 10/ 3989 – 92 dated 07.08.2018.

The proponent mentioned that the mining activity will be carried out by open cast semi-mechanized method without drilling and blasting. Mining is proposed up to a depth of 3.0 m in river bed. River bed mining is for extracting Boulder, Gravel and Sand from River bed. Light weight excavators will be used for digging and loading of mineral in tippers. No OB/ waste material will be produced. PP submitted that sand shall be excavated by deploying Nos. 05 JCB/excavator of capacity 0.9 m³ and transported through tippers 25 Nos. Trucks/Tippers/tractor of 25 tones capacity. PP submitted that 5 Nos. water tanker of 5000 liters is proposed for proper dust suppression. The PP previously submitted that total geological reserve is 27, 00,000 and Mineable Reserve is 22, 95,000 Tonnes. The PP now re-calculated the geological reserves using datamine software and submitted that now the total geological reserve is 3510000 Tonnes out of which mineable reserve is 2373356 Tonnes.

Observation of EAC: The Committee observed that i) during the meeting Committee asked the PP & Consultant that how the material will be taken out from the mining pit. The PP submitted that material will be taken out from the pit by tractor and then dumped at

storage site from there it will be loaded into trucks for further transportation. The Committee observed that on perusal mining plan it has come to the notice that PP has proposed that material will be taken out from pit through excavator and then it will be loaded into the trucks for further transportation. Thus there is a contradiction in statement made by the PP & Consultant.

ii) The Consultant also submitted that payload of transportation vehicle to be used will be 16 tons. The Committee asked the consultant to verify the data but the consultant confirms that 16 tonners will be used. The Committee observed that in mining plan and EIA Report the 25 Tonne capacity tippers was mentioned for calculation of number of trips; even for the air qualities modeling 25 tonne capacity vehicles were proposed. Thus, the Committee is of the view that PP should confirm the carrying capacity of the vehicles to be used for this project and accordingly calculate the number of trips, traffic study and air quality modeling.

iii) The Committee observed that the based on the methodology proposed by earlier EAC the PP has collected the base line data and also PP has calculated the total geological reserve considering the specific density of the material as 2.6 Tonne/m³ but in the same riverbed other PP submitted that the specific gravity of the material in the said river bed is 1.82 Tonne/m³. Considering this the total reserve in the mining lease comes out to be 2457000 Tonnes and minable reserve as 1661349.2 Tonnes. Considering the average specific gravity of 2.0 Tonne/m³ the total reserve in the mining lease comes out to be 2700000 Tonnes and minable reserve as 1825658.5 Tonnes.

PP submitted that the maximum working depth of mining will be 3 m bgl in river bed where the groundwater table exists at an average depth of 8-10 m bgl, so mining depth will not intersect the ground water table. PP submitted that the water will be taken from existing water sources from nearby villages or tanker supplier. PP has submitted that an application regarding ground water extraction has been submitted to CGWA on dated 24.04.2018. The PP submitted that total water requirement was previously 120 KLD which is now reduced to 30 KLD (20 KLD for dust suppression, 2.5 KLD for Domestic use, 7.0 KLD for plantation).

Observation of EAC: i) The committee observed that Permission from CGWA is still awaited and thus provision of Ministry's O.M No 21-103/2015-IA.III dated 2.11.2018 is applicable for this project which is regarding terms of reference related to ground water withdrawal wherein it has mentioned that following ToR shall be invariably incorporated to address the issues while prescribing ToRs for various developmental projects:

a) In the projects where ground water is proposed as water source, the project proponent shall apply to the Central Ground Water Authority (CGWA)/State Ground Water Authority(SGWA), as the case may be, for obtaining No Objection Certificate (NOC), if applicable, the MoEF&CC/SEAC may ensure that such application has been made.

b) Approval/permission of CGWA/SGWA shall be obtained before drawing ground water for the project activities. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.

ii) The PP has proposed that use of atomizer water tanker will reduce the water consumption by 50% but the same is not mentioned in the list of mining machinery. Thus, PP should provide the number of water tanker having mist generator cannon for this project and accordingly revise the EMP cost.

The PP previously submitted that the total plantation will be 22300 covering an area of 15 Ha. The PP now submitted revised plantation plan wherein 31455 saplings will be planted on 20.97 Ha area covering 7 villages [Rattewali (7290 saplings), Ganeshpur (2475 saplings), Bharoli (1875 saplings), Amrala (2805 saplings), Alipur(2325 saplings), Parwala(4680 saplings), Kambala(3180 saplings), Taparian(4545 saplings), and Kanauli (2280 saplings)]. Inside the villages plantation will be carried out on Village Road (Panchayat Bhawan, Community Center, School and Public Health Centre.

Observation of EAC: The Committee has observed that PP has selected large area for plantation but in order to monitor the same the PP should submit the detailed plantation plan which clearly mention the name, address, geo-location and photograph of school, Panchayat Bhawan, Community Center and Public Health Centre where plantation shall be carried out. In addition to this PP should submit the length & geo-locations of roads along which plantation will be carried out. The PP should clearly bring out the number of saplings, area to be covered under plantation in each of these locations. The Committee also suggested that PP should carry out plantation of vetiver grass in 7.5 meter of the safety zone around the lease boundary to protect the banks of the river. The budget for plantation shall be included in the EMP.

The Project Proponent reported that there is no National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, and Tiger/Elephant Reserves/ Critically Polluted areas/Aravali located within the radius of 10 km of the mine lease area. However, Khol Hai Raitan Wildlife Sanctuary lies at the distance of 1.98 Km in N direction. In this regard the proponent submitted LR No. 5113 dated 19.09.2017 received under RTI Act, 2005 from Forest Department, Haryana.

Schedule-1 Species & Wildlife Conservation Plan: In this regard the proponent submitted LR No. 5113 dated 19.09.2017 received under RTI Act, 2005 from Forest Department, Haryana. In the same letter the list of flora and fauna is also provided. The PP submitted that there are three Schedule-1 species in the study area viz. Leopard, Indian Peafowl and Indian Python and their conservation plan (Rs. 15 Lakhs) which includes i) Rs 5.0 Lakh for Planting of trees groves in surrounding area and Promotion of agro forest in villages planting fruits trees, ii) Rs 5.0 Lakh for artificial nests, feeding and watering arrangement for animals , iii) Rs 2.0 Lakh for Workshops, Training and awareness programs, iv) Rs 2.0 Lakh for Water supply and v) Rs 1.0 Lakh for Contingency has been prepared and submitted to APCCF Panchkula Haryana for their approval on 22.12.2017. The PCCF (Wildlife), Panchkula, Haryana has approved the conservation plan (total amount ₹ 15 Lakh) vide LR No 1912 dated 30.08.2018. There is one more Schedule-1 species Pangolin (*Manis crassicauda*) for

which conservation plan has been submitted via email for approval of Chief Wildlife Warden on 19.11.2018. The PP has revised the budget of Conservation plan for all the Schedule-1 species to 23.60 Lakh.

Observation of EAC: The Committee is of the view that PP should confirm whether the amount already approved for the conservation plan has been deposited in the Government account or not and what is the status of approval of revised conservation plan.

PP has submitted the District Survey Report for Sustainable Sand Mining for Districts Panchkula.

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. However, the concentration of PM₁₀ and PM_{2.5} is slightly more than NAAQS at location number 5 (Rajpur Rani) and other location also values are slightly less than NAAQS.

The PP previously submitted (CALINE) the following GLC in worst case and control case scenario and now submitted (AERMOD V 7.1.0) are as follows:

Previous: (CALINE) PM₁₀

Location Code	Location Name	Max Baseline Conc. (µg/m ³)	Cumulative GLC (µg/m ³) (PM10) Worst Case	Cumulative GLC (µg/m ³) (PM10) Control Case
A1	Project Site	98.3	127.8981	105.8901
A2	Near Village Rattewali	96.1	132.7945	105.2985
A3	Near Village Parwala	91.7	98.8248	93.5048
A4	Near Rajpura PF Near Bharoli	88.3	91.82943	89.19743
A5	Near Village Rajpura Rani	103.8	104.9762	104.0802
A6	Near Village Alipur	98.2	98.20159	98.20159
A7	Near Village Khetprali	97.2	107.058	99.66598

Revised: (AERMOD 7.1.0) PM₁₀

Location Code	Location Name	Max Baseline Conc. ($\mu\text{g}/\text{m}^3$)	Cumulative GLC ($\mu\text{g}/\text{m}^3$) (PM10) Worst Case	Cumulative GLC ($\mu\text{g}/\text{m}^3$) (PM10) Control Case
A1	Project Site	98.3	113.1	104.7
A2	Near Village Rattewali	96.1	101	98.2
A3	Near Village Parwala	91.7	93.3	92.4
A4	Near Rajpura PF Near Bharoli	88.3	88.8	88.5
A5	Near Village Rajpura Rani	103.8	104.1	103.9
A6	Near Village Alipur	98.2	98.4	98.2
A7	Near Village Khetprali	97.2	97.3	97.2

Previous: (CALINE) PM_{2.5}

Location Code	Location Name	Max Baseline Conc. ($\mu\text{g}/\text{m}^3$)	Cumulative GLC ($\mu\text{g}/\text{m}^3$) (PM2.5) Worst Case	Cumulative GLC ($\mu\text{g}/\text{m}^3$) (PM2.5) Control Case
A1	Project Site	59.2	62.12158	59.93758
A2	Near Village Rattewali	55.5	59.19655	56.39655
A3	Near Village Parwala	50.7	51.42848	50.86848
A4	Near Rajpura PF Near Bharoli	50.3	50.63605	50.41205
A5	Near Village Rajpura Rani	57.4	57.51201	57.45601
A6	Near Village Alipur	53.5	53.50006	53.50006
A7	Near Village Khetprali	57.3	58.30807	57.52407

Revised: (AIRMOD 7.1.0) PM_{2.5}

Location Code	Location Name	Max Baseline Conc. ($\mu\text{g}/\text{m}^3$)	Cumulative GLC ($\mu\text{g}/\text{m}^3$) (PM2.5) Worst Case	Cumulative GLC ($\mu\text{g}/\text{m}^3$) (PM2.5) Control Case
A1	Project Site	59.2	68	63
A2	Near Village	55.5	58.4	56.4

	Rattewali			
A3	Near Village Parwala	50.7	51.7	51.1
A4	Near Rajpura PF Near Bharoli	50.3	50.5	50.3
A5	Near Village Rajpura Rani	57.4	64.2	64.1
A6	Near Village Alipur	53.5	53.5	53.5
A7	Near Village Khetprali	57.3	57.3	57.3

Observation of EAC: The Committee observed that in the Control Case Scenario also there is slight increase in GLC values of PM₁₀& PM_{2.5} as compared to NAAQS. The Committee observed that previously committee asked the PP to verify the wind rose diagram but it has observed that the same not has been changed. The Committee also observed that although PP has not submitted the Cluster Certificate but there are other mining leases within 500 meters of this mining lease. Thus, air quality modeling needs to be done taken maximum production capacity of all the mining leases in the cluster and EMP for cluster needs to be prepared so that Committee can decide on the quantity of the material that can be permitted for this mining lease.

The Project Proponent reported that public hearing for the proposed project of "Rattewali Block PKL / B-10" of M/s Tirupati Roadways was held under Chairmanship of Mr. Mukulkumar HCS, Additional Deputy Magistrate, Panchkula at the mine site, on dated 17.04.2018 at 3:00 PM as per the EIA Notification dated 14th September 2006, as amended by the Ministry of environment and Forest, New Delhi. The advertisement for public hearing was published in 'The Tribune' & 'Amar Ujala' on 14.03.2018. The issues raised during public hearing were also deliberated during the meeting which includes provision of road for transportation of mineral, dust suppression, provision for dust suppression, employment, social welfare, compensation to land owners, installation of crusher, and maintenance of roads. The commitments made during PH by the PP was Rs 21 Lakh/annum is proposed under CSR, Rs 30.50 Lakh under EMP which include Rs 18 Lakh (Capital Cost) for construction of roads and Rs 4 Lakh/annum for maintenance of roads. Further, PP committed that preference will be given to local in employment and around 400-500 person will get direct and indirect employment form the projects, motarable road shall be constructed, every year about 5000 trees will be planted and about 22000 trees will be planted in 5 years of local species after consulting with the forest department. Tree guards will be erected around the plants for their protection and survival. Watering of plant will be done regularly by the gardeners, and compensation of land owner on mutually agreeable rates. PP reported that there is no court case/ litigation pending against the project.

Observation of EAC: The Committee observed that i) the ToR was issued on 24.09.2017. The baseline data was collected during October, 2017 – December, 2017. The PP obtained the approval of mining plan on 24.01.2018. The public hearing notice was given on 14.03.2018. The PH was conducted on 17.04.2018. The PH was chaired by Additional District Magistrate, Panchkula.

ii) The Committee observed that PP has increased the number of saplings to be planted, proposed to engage separate manpower for implementation of EMP, the PP has proposed for atomized water spraying, thus budget for all these activities to be the same needs to be included in EMP. The Committee also observed that major issue raised by local public is construction of roads and dust suppression. Thus PP should revise the EMP considering all these factors.

PP has submitted that budget of Environment Social Commitment shall be ₹ 21.0 Lakhs/annum out of which ₹ 5.0 Lakhs shall be used for Sanitations (installation of 6 bio toilets@40000 Rupees/toilet) and drinking water facility at Village Rattewali (₹ 2.50 Lakh), ₹ 5.0 Lakhs for Sanitations (installation of 6 bio toilets @40000 Rupees/toilet) and drinking water facility at Village Ganeshpur(₹ 2.50 Lakh), ₹ 5.0 Lakhs for Sanitations (installation of 6 bio toilets@40000 Rupees/toilet) and drinking water facility at Village Tibbi(₹ 2.50 Lakh) PP submitted that this target will be achieved within 1 year of mining activity started. PP proposed ₹ 6.0 Lakhs for one day health checkup camps in every 6 months in each year at mine site and nearby villages (Rattewali, Ganeshpur, &Tibbi).

The PP now revised the CER cost which is Rs. 45.0 Lakh (Capital Cost) & Rs 21.0 Lakh (Recurring) the details of the same are as follows:

Activity-1: Infrastructure work for education

(All the Activity Implements in Four Villages viz. i) Rajkiya Vidhyalya, Tibbi; ii) Rajkiya Vidhyalya, Rattewali, iii) Rajkiya Vidhyalya , Parwalaand iv) Rajkiya Vidhyalya,Shamtu)

a) New classroom construction in Government School. (Total No. of New Classroom – 8 ;Construction New Classroom in each school 2*Rs.90,000/-)

Capital Investment Year wise (Rs. In Lacs)as follows & recurring cost /annum is 2.5 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	Total
Activity (1 a)	1.80	Nil	1.80	Nil	1.80	Nil	1.80	7.2

b) Construction of new Toilet for students in Government School, (Total No. of New Toilet – 8 (4 male & 4 females; cost Rs. 17,500/- per toilet)

Capital Investment Year wise (Rs. In Lacs) as follows & recurring cost /annum is 1.5 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	Total
Activity (1 b)	1.4	1.4	Nil	Nil	Nil	Nil	Nil	2.8

- c) Toilet Repair in nearby villages other than new construction including septic tank and soak pit (Total No. of Toilet repair –17; @Rs. 16,470/-)

Capital Investment Year wise (Rs. In Lacs) as follows & recurring cost /annum is 2.5 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	Total
Activity (1 c)	0.40	0.40	0.40	0.40	0.40	0.40	0.40	2.8

- d) Renovation Computer Lab in secondary Government School (Total No. of Computer – 24, Computer with Installation and Computer Table in each school 6*Rs. 30,000/-)

Capital Investment Year wise (Rs. In Lacs) as follows & recurring cost /annum is 3.5 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	Total
Activity (1 d)	1.80	Nil	1.80	Nil	1.80	Nil	1.80	7.2

Activity-2: Infrastructure work for Drinking Water/ Sanitation (Drinking water R.O. installation in Machine in Public Health Centre (PHC) at Village 1. Rattewali, 2. Shamtu, 3 Parwala, 4. Tibbi; Total No. of water ATM Machine: 4; One R.O. Water 4*Rs.98000/-)

Capital Investment Year wise (Rs. In Lacs) as follows & recurring cost /annum is 3.0 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	Total
Activity (1 d)	3.92	3.92	Nil	Nil	Nil	Nil	Nil	7.84

Activity-3: Medical & Health (Organize Health check-up camps and Medicine distribution programme to provide Malnutrition checkup camps and Access Treatment Programmes to the nearest habitation of village1. Rattewali, 2. Shamtu ,3 Parwala, 4. Tibbi; Health check-up camp in each village 4*Rs. 75,000/-)

Capital Investment Year wise (Rs. In Lacs)as follows & recurring cost /annum is 1.0 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	Total
Activity (1 d)	0.75	0.75	0.75	0.75	Nil	Nil	Nil	3.75

Activity-4: Awareness through distribution of Sanitary Napkin made by S.H.G (Women's Empowerment & Health & Hygiene). Awareness on personal hygiene (cost of 1 pack Rs 40; number of beneficiaries 3500-6000)

Capital Investment Year wise (Rs. In Lacs) as follows & recurring cost /annum is 1.0 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	Total
Activity (1 d)	1.10	Nil	0.60	Nil	0.60	Nil	0.60	2.9

Observation of EAC: The Committee observed that amount proposed by PP for construction of class in room is just Rs 90,000 which is not a feasible estimate; Thus budget under CER needs to be revised.

The PP submitted that the as no (R & R) is involved in this project.

The Project Proponent submitted that the budget earmarked for Environmental Management Plan (EMP) shall be ₹ 44 Lakh (Capital) & ₹ 30.5 Lakh (recurring/annum) which includes i) Pollution monitoring – Air, Water, Noise and Soil, ₹ 5 Lakh (recurring), ii) Dust Suppression ₹ 20 Lakh (Capital) & ₹ 5 Lakh (recurring), iii) Plantation will be at Village-Rattewali, near School- Doon Public School and along the Haul road of these villages, ₹ 2 Lakh (Capital) & ₹ 5 Lakh (recurring),iv) Rainwater recharging (outside the project site) ₹ 4 Lakh (Capital) & ₹ 0.5 Lakh (recurring), v) Haul road and other roads repair and maintenance ₹ 18 Lakh (Capital) & ₹ 4.0 Lakh (recurring), and vi) Pre monsoon and Post Monsoon survey for sedimentation in ₹ 10.0 Lakh (recurring). The PP also submitted that in order to implement the EMP 5 persons will be engaged viz. Manager (EHS) [₹ 23000 /Month], Asst. Manager (Environment) [₹ 20000 /Month], Environmental Executive [₹

20000 /Month], Horticulturist [₹10000 /Month], and Supervisor [₹8000 /Month]. The total budget for the staff will be 9.72 Lakh/annum.

Observation of EAC: The PP has proposed to increase the number of plants to be planted from 22300 to 31455 and amount previously proposed for plantation was Rs 27.0 Lakh @ Rs 121/sapling. The revised budget proposed under plantation is Rs 38.05 Lakh (Capital) & 9.51 Lakh (25% recurring). But the plantation cost in EMP is mentioned as Rs 2 Lakh (Capital) & Rs 5 Lakh (recurring). Further, the PP has reduced the water consumption by atomized water spraying but did not provide the budget for Water tanker having mist generator canon attachment. Thus, the EMP cost needs to be revised by including plantation cost ₹ 38.05 Lakh (Capital) & ₹ 9.51 Lakh (25% recurring)., cost of one water taker having mist generator canon attachment 25 Lakh, and cost of manpower for implementation of EMP. Thus, the total cost of EMP works out to be 105.05 Lakh (Capital) & ₹ 44.73 Lakh (recurring/annum).

PP has submitted that the budget for Occupational Health and Safety shall be ₹10.0 Lakhs/annum out of which ₹1 Lakh shall be used for Measures to Prevent Accidents during mineral Loading, ₹1 Lakh for measures to Prevent Accidents during minerals Transportation, ₹1 Lakh for measures to Prevent Accidents due to Trucks/ Dumpers etc., ₹2 Lakh for measures to Prevent Dangerous Incidents during Inundation/Flooding, ₹2 Lakh for education awareness and first aid kit, ₹3 Lakh for medical Examination Schedule.

Previously the Project Proponent submitted that the total project cost shall be ₹ 7.0 Crore and shall give direct employment to 69 persons. PP now submitted that the Project Cost shall be read as 7.6914 Crores and 73 people shall be employed.

Observation of EAC: The PP has mentioned that 5 persons shall be engaged for the implementation of EMP thus the total employment shall be 78 and PP needs to revise the project cost based on the suggestion of the EAC.

The PP also submitted the point wise compliance of the suggestion previously made by the EAC. The suggestion proposed by EAC and reply of the PP are as follows:

The Proponent should collect the baseline data in respect of initial level of the mining lease. For this Permanent Bench Marks (BM) needs to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level. The entire mining lease should be divided suitably in the grids of 25 Meter x 25 Meters with the help of sections across the width of river and along the direction of flow of the river. The levels (MSL & RL) of the corner point of each grid need to be recorded. Each Grid should be suitably numbered for identification. PP should identity grids which will we worked out and grids which will come under no mining zone i.e. safety barriers from the river bank, safety barrier at lease boundary, restrictions as per condition of LoI/Mining Lease deed, restriction as Mineral Concession Rule of the Concerned State, restrictions as per sustainable sand mining management guidelines 2016 etc. The PP should ascertain the level of

the river bed with the help of sections drawn across the width of the rivers and along the direction of flow of the river and based on this ascertain the depth of mining of each grid. The PP should provide a detailed map and table clearly showing the grid wise material availability, dimension of grid, location of grid (lat & long of the corner points), level of grid (AMSL and RL), depth of mining in each grid, grids left under no mining zone etc.

PP submitted that Bed Level in Lease area is ranging from 376 MSL (Northern point) to 358 MSL (Southern point). Two Permanent Bench Marks at prominent location close to mining lease are established. Coordinates are as below:-

Bench Mark	Latitude (N)	Longitude (E)	Elevation (MSL) In reference to Nearest RS (Chandimandir Cantonment RS – 13Km towards WNW i.e. 381 MSL (Latitude:- 30°43'37.34"N; Longitude:- 76°53'13.03"E) and NH – 73, Mattewali – 5.35Km, SSW (Latitude:- 30°36'59.72"N; Longitude:- 76°56'27.42"E)
BM-1	30°38'57.90"	76°59'32.92"	368.00
BM-2	30°39'25.33"	76°59'41.48"	373.00

Lease is divided into 25m x 25m grid along the length and width of the lease area. Bed Level in the Lease area is ranging from 376 MSL (Northern point) to 358 MSL (Southern point). Each grid is numbered (62 parallel grid lines (00 to N-1550) and 38 cross Sectional grids (00 to E -900)) has been marked and numbered. Each grid is numbered (62 parallel grid lines (00 to N-1500) and 38 Cross Sectional grid lines (00 to E -900)) has been marked and numbered.

Season	Working Grid	Non-Working Grid
Pre-Monsoon (1 st April to 14 th June)	Western Zone – N-00 to N – 1325/ E-75 to E-700	N-00 to N – 1425/ E – 100 to E - 875
Monsoon (15 th June to 1 st	All the grids are non-working	

October)		
Post-Monsoon (2 nd October to 31 st March)	Western Zone - N-00 to N - 1325/ E-75 to E-700 Eastern Zone - N - 00 to N -1300/ E - 175 to E - 925	N 1275/ E-400 N1500/ E-825

No mine working zone i.e. safety barriers from the river bank, safety barrier at lease boundary has been laid by as per condition of LoI/ Mining Lease Deed, restriction as Mineral Concession Rule of the Concerned State, restrictions as per Sustainable Sand Mining Management Guidelines' 2016 etc. Map showing 63 sections of the lease area with coordinates and its subsequent cross sections with geo-reference established with respect to bench mark are depicted in X-Y-Z axis. 08 Sections (Along the river flow) have been made showing the bed level and river flow. Depth of the mining bed will be up to 3m/ 2m above the groundwater. Depth of the mining of each grid is shown on slide no. 5 of presentation. Detailed map showing grid wise material availability, dimension of grid, location of grid, level of grid, depth of grid (Mineable) is shown indicatively on Slide no. 5 of the presentation. Reserve estimation of the mineable area (63 cross sections) is given in approved Modified Mining Plan at page no. 23.

PP should suitably name each section line. Section Plan for both sections drawn across the river and along the direction of the river needs to be submitted. Each Section should have level on vertical axis and distance from the bank of river on horizontal axis. For the section along the direction of the river the levels to be shown on vertical axis and distance from upstream to downstream should be shown on horizontal axis.

Each grid corner point i.e. 62 parallel grid lines (00 to N-1550) and 38 Cross Sectional grid lines (00 to E -900) has been marked and numbered. Cross section along the river has been drawn with respect to X- Y-Z values. Section including level and distance from the bank has been prepared.

The modified Mining Plan should be prepared based on the actual replenishment study, above mentioned survey and all the information sought above needs to be a part of the mining plan. In the Mining Plan year wise production plan should be prepared in three plates for each year. Plate-1 shows the mine working for the Pre-Monsoon period (1st April - 14th June), Plate-2 should show the status of the mine after the replenishment (as per actual replenishment study) and no working should be proposed in this period (15th June-1st October) as the Mining Lease area needs to be left for the replenishment of the river bed mineral and Plate-3 show

the mine working after replenishment of the river bed i.e. Post Monsoon period (2nd October - 31st March).

Modified Mining Plan based on the actual replenishment study has been approved from the Office of Department of Mines and Geology, State Mining Engineer, Haryana vide letter DMG/ HY/ MP/ Rattewali Block/ PKL -B - 10/ 2017/ 3989 - 92 dated 07.08.2018. In the Modified Mining Plan, year-wise working plan for targeted production to the tune of 19,00,000 TPA capacity of mineral has been prepared in three plates for each year. In the Modified Mining Plan, year-wise working plan for targeted production to the tune of 19,00,000 TPA capacity of sand has been prepared in three plates for each year (Pre-monsoon) as below:-

Season	Working Grid
Pre-Monsoon (1 st April to 14 th June)	Western Zone - N-00 to N - 1325/ E-75 to E-700

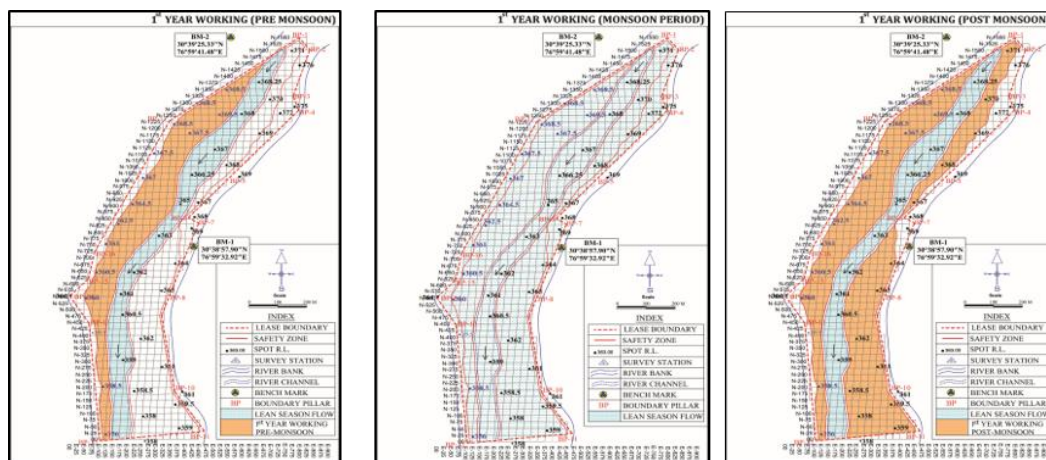
Plate Nos.	Year working of	Time period
6A	I st	1 st April - 14 th June
6D	II nd	
6G	III rd	
6J	IV th	
6M	V th	

Plate-2 should show the status of the mine after the replenishment (As per actual replenishment study) No working should be proposed in this period (15th June-1st Oct) as the mining lease area needs to be left for the replenishment of the river bed mineral. No mining will be carried out during monsoon i.e. 15th June to 1st October.

Plate Nos.	Year of working	Time period
6A	I st	15 th June - 1 st October
6D	II nd	
6G	III rd	
6J	IV th	

6M	V th	
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Plate-3 show the mine working after replenishment of the river bed i.e. post monsoon period (2nd October-31st March).



Reserve Scenario as Per Topo sheet Boundary

Scenario	Parameter	Density				
			Volume	Tonnes	Volume	Tonnes
Scenario 1	3m down from the surface	2.6	13,64,912.11	35,48,771.49	4,77,410.17	12,41,266.45
Scenario 2	3m down from average section RL at each section	2.6	13,46,630.22	35,01,238.57	4,66,891.87	12,13,918.87
Scenario 3	3m down from max RL of first or last point at each section	2.6	10,54,598.86	27,41,957.04	3,62,446.73	9,42,361.49

Reserve Scenario as Per Google Earth

Scenario	Parameter	Density	Geological		Mineable	
			Volume	Tonnes	Volume	Tonnes
Scenario 1	3m down from the surface	2.6	13,64,912.11	35,48,771.49	6,54,169.92	17,00,841.80
Scenario 2	3m down from average section RL at each section	2.6	13,46,630.22	35,01,238.57	6,24,687.70	16,24,188.03
Scenario 3	3m down from max RL of first or last point at each section	2.6	10,54,598.86	27,41,957.04	4,84,947.36	12,60,863.13

**Note:- Based on the reserve estimation drawn for each grid on the basis of datamine software modeling, the revision of the Mining Plan will be undertaken after approval of EC.*

Observation of EAC: The Committee observed that PP has not provided the effective area of mining and area to be kept in the safety zone. The Committee also observed that specific gravity of the material used is 2.6 but as per theoretical replenishment study report it is 2.0 and data submitted by other mining lease it is 1.83 tons/m³. The Committee noted that already in the cases of the nearby mining leases the EAC sought inspection report of Sub-Committee and it was also mentioned that the sub-committee may verify the specific gravity of the material.

PP should specifically mention in the mining plan that in the subsequent scheme of mining/review of mining plan, the year wise data pertaining to replenishment study (all five years) shall be provided which include the level (AMSL & RL) of river bed recorded before and after the monsoon, year wise replenishment quantity, all plan & sections of the replenishment study for the past five years.

PP submitted that the same has been incorporated in the approved Modified Mining Plan. The year-wise data pertaining to replenishment study (all five years) is given in approved Modified Mining Plan at page no. 15 to 24 & Annexure-III. For first year, three working plan/ Sections utilizing data mine for period: - Pre-Monsoon from 1st April to 14th June; Monsoon (Non-working) from 15th June to 1st October and Post-Monsoon from 2nd October to 31st March. Similarly, an excel sheet showing X-Y-Z will be maintained for both working seasons.

PP should also submit an undertaking to the effect that each year after the replenishment study the plan & section shall be submitted to concerned Department of Mining & Geology of the State for verification and Official Record.

PP submitted that Legal undertaking on Rs. 50/- Non-Judicial stamp duly notarized by the Project Proponent to the effect that each year after the replenishment study the plan & section will be submitted to the Office of State Mining Engineer, DMG, Haryana for verification and official record.

The PP should also submit a kml file wherein the above mentioned grid plans is superimposed on the satellite imaginary.

PP shown the Grid Plan superimposed on Satellite Imagery.

PP should submit the detailed replenishment study report.

PP submitted that the lease area was virtually divided into 25m x 25m grid both working and non-working. Each grid was then identified with unique coding with respect to bench mark and geo-referenced on factual basis. Each identified grid with appropriate dimension and coordinates was earmarked with respect to MSL. Depth of each grid was mentioned on Z axis. All working grid were than fixed for a depth of 3m and reserve estimation of each grid was identified. This gave the actual quantification of sand replenished in Post-Monsoon. Similar study in Pre-Monsoon will determine the depth of each working grid to be excavated. All the data of every season and year will be reportedly taken prior to mining and submitted to respective department. **The replenishment estimation as approved in the Modified Mining Plan is based on theoretical empirical formula with estimation of bed load transport comprising of analytical models to calculate the replenishment estimation.** The iso-pluvial maps of IMD have been used for estimation of rainfall. Catchment yield has been computed using the Strange's runoff method (Strange's Monsoon runoff curves) for the runoff coefficient. Peak flood discharge for the study area calculated by using Dickens, Jarvis and Rational formula at 25, 50 and 100 years return period. The estimation of bed load transport using Ackers and White equation.

Observation of EAC: The Committee observed that the PP has not submitted the actual replenishment study report rather a report on theoretical calculation is submitted.

PP should ensure that plan and section that will be submitted to EAC should be in proper scale.

PP submitted that all the Plans along with sections submitted to EAC are in proper scale.

SL. No.	Maps	Scale
1.	Key Plan	1:50,000
2.	Surface Plan	1:2,000
3.	Geological Plan/ Section	1:1000/ 1: 2000
4.	Environmental Plan	1:5,000

Observation of EAC: The PP did not submit the plan & section on the above mentioned scale.

Detailed traffic plan needs to be submitted clearly mentioning the number of tucks to be deployed, number of trips during the day, road that will be used for the transportation of mineral, impact of transportation on the nearby area, mitigative measures to be adopted, the plan on the suitable scale needs to be submitted clearly road network of the existing mining leases and also of the other mining lease within the study area to ascertain the cumulative impact of the transportation. The PP should optimize the production & transportation requirement by taking into account the traffic density due to other mining projects.

PP submitted that 130 trucks will be deployed for the transportation of sand.283 number of trips per day (@25 Tonner each).

S. No.	Particulars	Remark
1	Total Production Per Day in Tons	7,090
2	No. of Trips Per Day (@25 Tonner)	283
3	No. of Trips per Hour (@10Hrs working)	29

PP submitted that mineral will be dispatched to the destination connecting haul road (0.5 Km + 0.6Km + 0.45Km X 10m width each) via Village by pass road and finally merges on the National Highway NH-73. Traffic density on the Village by pass Road and National Highway is 65 and 150 Vehicles/ hour respectively, which will increased to 179 Vehicles/ hr. (150 +15 vehicles per hour). The cumulative scenario for air emission in the area with presence of other mining –at a distance of 8.5 Km towards SE will not ascertained as the impact scenario persist only on the unpaved area at max. Existing V/ C ratio is 0.26 and 0.24 on village road/ MDR and National Highway - 73 and Level of Service is B which is 'Very Good' as per classification. After commencement of production V/c ratio will be 0.38 and 0.29 on Village Road/ MDR and National Highway respectively and Level of Service will be B on village road/ MDR and National Highway is 'good' and 'very good' as per IRC Guidelines. The impacts due to transportation has been estimated using AERMOD View as provided in slide nos. 26 – 27 of the presentation.

S. No.	Emission (Kg/V,Km/ T)	PM₁₀	PM_{2.5}

1	Working pit to Village Road (Unpaved)	1.261	0.3783
2	Village Road to End Use (Paved)	0.0697	0.021
*Source: - USEPA -42 Series 13.2.1(Paved) and 13.2.2. (Unpaved)			

The mitigation measures proposed by PP are i) Plantation along on haul road will be carried out ,2) Regular water sprinkling on haul roads will be done,3) Only PUC certified vehicle will be allowed for transportation,4) Overloading of vehicles will be avoided. All the vehicles will covered using tarpaulin sheets,5) Speed limit as per statutory rules will be maintained. The PP also submit the transportation route map showing road network and other mining leases with the study area to ascertain the cumulative impact due to transportation.

The PP submitted that the traffic density has been considered during planning of production. Due to proposed project, 29 trips per hour are envisaged to be added in the existing traffic. Thus, the peak transport load augmented will be max. 10%, contributing to less than 1% of the emission load at max. After commencement of production V/C ratio will be 0.26 and 0.24 for Village Road/ MDR and National Highway respectively. So, the Level of Service is B for Village Road/ MDR and National Highway is 'very good' as per IRC Guidelines.

S. No.	Mining Lease	Area (Ha.)	Production Capacity (TPA)	No. of Trips	
				Per Day	Per Hour (@10 Hrs/ Day)
1	Tirupati Roadways	45	19,00,000	283	29
2	Gobindpur Block/ PKL - B- 18	28.4	12,78,000	190	19

Observation of EAC: The Committee observed that there are other mining leases near this mining lease and details of the same is not provided by the PP. Thus, traffic study is incomplete.

PP should optimize the production requirement based on the data collected above; the GLC of various pollutants should be well within the prescribed NAASQ Standards limit, reduces the water consumption, reduce the traffic density on the

roads, after taking into consideration the pollution load of the other mining leases in the study area

Scenario showing worst case (without EMP) and case with EMP

Pollutant	Maximum Incremental GLC's ($\mu\text{g}/\text{m}^3$)	
	With EMP (75%)	Without EMP
<i>PM₁₀</i>	6.42	14.763
<i>PM_{2.5}</i>	3.807	8.822
<i>NO_x</i>	0.039	0.039
<i>CO</i>	0.021	0.021

<i>Traffic</i>	<i>Existing Vehicles 150</i>	<i>Incremental will be 15 Vehicles</i>	<i>Thus, an increment of 10% with emission load of less than 1%.</i>	<i>With effective EMP, the emission load contributed will be less than 0.5%.</i>
<i>Water</i>	<i>120 KLD (Proposed by former ACO)</i>	<i>30 KLD with all effective conservation measures.</i>	<i>Atomized water sprinkling for dust suppression and drip irrigation for plantation.</i>	

Cumulative Ground Level Concentrations (With EMP) at Different Locations

Location	Ground Level Concentrations of PM_{10} in mg/m^3			
	Predicted	Background (Max.)	Total Expected	CPCB Standard
<i>Mine Site</i>	6.42	98.3	104.7*	100
<i>Rattewali</i>	2.14	96.1	98.2	100
<i>Parwala</i>	0.71	91.7	92.4	100
<i>Raipura PF near Bharoli</i>	0.2	88.3	88.5	100
<i>Raipur Rani</i>	0.1	103.8	103.9	100
<i>Alipur</i>	<0.1	98.2	98.2	100

Khatauli	<0.1	97.2	97.2	100
Location	Ground Level Concentrations of PM_{2.5} in mg/m³			
	Predicted	Background (Max.)	Total Expected	CPCB Standard
Mine Site	3.807	59.2	63.0*	60
Rattewali	0.85	55.5	56.4	60
Parwala	0.4	50.7	51.1	60
Raipura PF near Bharoli	<0.1	50.3	50.3	60
Raipur Rani	<0.1	64.1	64.1	60
Alipur	<0.1	53.5	53.5	60
Khatauli	<0.1	57.3	57.3	60
Location	Ground Level Concentrations of NO₂ in mg/m³			
	Predicted	Background (Max.)	Total Expected	CPCB Standard
Mine Site	0.04	38.6	38.6	80
Rattewali	<0.1	34.2	34.2	80
Parwala	<0.1	30.2	30.2	80
Raipura PF near Bharoli	<0.1	30.3	30.3	80
Raipur Rani	<0.1	33.5	33.5	80
Alipur	<0.1	35.3	35.3	80
Khatauli	<0.1	33.6	33.6	80

* Reason for High value:- agricultural crop residues are burnt during the months of October and November each year in the Indo-Gangetic Plains (IGP) which has significant impact on greenhouse gas emissions and aerosol loading (Badarinath et al., 2009).

Note: - The GLC's for SO_x cannot be determined as the GLC obtained is negligible as compared to other pollutant like PM₁₀, PM_{2.5}, NO_x & CO. As the combustion of fuel (low sulphur content) will have values of SO_x that cannot be determined in the modeling results. The values less than 0.1g/ km is considered as negligible.

Cumulative Ground Level Concentrations (Worst Scenario) at different locations

Location	Ground Level Concentrations of PM₁₀ in mg/m³			
	Predicted	Background (Max.)	Total Expected	CPCB Standard
Mine Site	14.763	98.3	113.1	100

Rattewali	4.92	96.1	101	100
Parwala	1.64	91.7	93.3	100
Raipura PF near Bharoli	0.5	88.3	88.8	100
Raipur Rani	0.3	103.8	104.1	100
Alipur	0.2	98.2	98.4	100
Khatauli	0.1	97.2	97.3	100
Location	Ground Level Concentrations of PM_{2.5} in mg/m³			
	Predicted	Background (Max.)	Total Expected	CPCB Standard
Mine Site	8.822	59.2	68	60
Rattewali	2.94	55.5	58.4	60
Parwala	0.98	50.7	51.7	60
Raipura PF near Bharoli	0.2	50.3	50.5	60
Raipur Rani	0.1	64.1	64.2	60
Alipur	<0.1	53.5	53.5	60
Khatauli	<0.1	57.3	57.3	60

Observation of EAC: The Committee observed there are other proposed mining lease close to this mining lease and impact on air quality due to the same is not considered. Thus, the above predictions are incomplete. In addition to this PP also not optimized the production quantity based to bring the GLC values within the NAASQ limits. Impact along the road side supported with line model is also not provided by the consultant.

Clear illegible copy of Advertisement published in national daily and vernacular daily for conduction public hearing needs to be submitted with name of newspaper and date of publication.

Public Hearing notice was published in two regional newspapers one in English and other in Hindi. 1. "The Tribune" – 14.03.2018 & 2. "Amar Ujala" – 14.03.2018.

All documents, certificates, and reports provided in EIA report should be legible.

PP submitted that the legible copies of all annexure, certificate and reports have been submitted.

List of schedule-1 species duly authenticated by State forest department clearly mentioning the number of schedule-1 species present in the study area and proof of submission of conservation plan to concerned chief wildlife warden.

PP submitted that Three Schedule – I species i.e. Python molurus (Phyton), Pavo cristatus (Pea-fowl) and Panthera pardus (Leopard) were reported in the buffer zone during the primary Survey. As per approved Conservation Plan obtained from the Office of the P.C.C.F. cum Wildlife Warden, Haryana vide letter no. 1912 dated 30th August 2018; following Scheduled I species are present in the entire district of Panchkula

S. No.	Name of Species	Zoological Name	Schedule	Remarks
1	Indian Peafowl	Pavo cristatus	I	Approved
2	Phyton	Phyton molurus	I	Approved
3	Leopard	Panthera pardus	I	Approved
4	Pangolin	Manis crassicauda	I	Under process

Observation of EAC: The Committee is of the view that PP should clarify whether the amount already approved has been deposited in the Government account or not and what is the status of approval of conservation plan.

Number of persons to be employed directly in the project.

As per approved Modified Mining Plan, approx. 73 local persons will be employed.

Observation of EAC: The Committee observed that PP has not included the manpower to be engaged for implementation EMP in the total employment.

Revised EIA after compliance of all the TOR conditions and after making necessary changes as suggested by the EAC.

The same has been noted and complied.

Observation of EAC: The Committee noted that EIA Report uploaded online is not page numbered.

Undertaking from PP & Consultant & NABET Certificate: Consultant submitted that the consultant shall be fully accountable for any misleading information mentioned in this statement.

Observation of EAC: The Committee observed that PP has already submitted an undertaking in this regard and Consultant also given an undertaking during the meeting.

Form-II: The requirement of submission is after the issuance of O.M. No. 22-8/2018 IA.III (M) dated 20.04.2018. The PP applied under Form-II.

Observation of EAC: The Committee observed that Consultant did not taken due care while filling the Form-II. It has observed that many a places wrong PDF file was uploaded.

Previously also consultant was advised by the Committee to take due care while filling the Form-II but it appears that consultant is not complying with the direction of EAC. Committee feels that one of the purpose of Form-II is that the various stakeholders have access to information uploaded for the project but if the NABET Accredited consultant do not pay due care in uploading the information than it will not only cause in-convenience to various stakeholders but also delayed the process of appraisal due to ADS & EDS.

The proposal is a **green field project** and does not requires verification in pursuant to Hon'ble Supreme Court order dated 02.08.2017 in the matter of Common Cause and S.O 804(E) dated 14.03.2017.

Observation of EAC: The PP needs to submit 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.

Replenishment Study: The PP has submitted a replenishment study report conducted by Hydro Geo Solutions, Jodhpur. Wherein it has mentioned that the river is Dudhgar Kee Nadi is an ephemeral stream in nature. Further, in the recommendation it has mentioned that *"the authenticated replenishment can only be established in the post monsoon period of 2018 after actual verification of the replenishment pits and river cross sections (difference in elevation) already established in the field."*

Observation of EAC: The Committee observed that PP has not carried out the realignment study and requested for grant of temporary permission. The Committee initially thought of granting limited quantity but also desired to know the background of the issue, legal position, decision already taken by MoEF&CC in this regard.

It is informed the Committee that EAC in its earlier meeting held on 24.10.2016 mentioned that "The sand mining proposals from other States namely Uttarakhand, Himachal Pradesh, Uttar Pradesh, Jammu and Kashmir, Haryana, and Bihar wherein there are **perennial rivers** and are, therefore, replenished during monsoons. Such annual replenishments raise the river bed at certain places along the river and need to be mined to avoid threat of floods during subsequent monsoon season. The Committee is of the view that in such States like Uttarakhand, Uttar Pradesh, Himachal Pradesh, Jammu & Kashmir, Haryana and Bihar the replenishment study is not required at the time of EC application and PP shall submit the replenishment study after 02 years of grant of EC." In the instant case the mining lease is falling on non-perennial river and thus require prior replenishment study report before grant of EC.

It is also informed to the Committee that The Hon'ble SC in its order dated 16.11.2017 in SLP(C) No.34134 of 2013 (State of Rajasthan Vs. Nature Club of Rajasthan) inter-alia mentioned that "In Court, serious allegations have been made that the State of Rajasthan is complicit with the miners/quarry holders and sand and bajri is being mined with impunity. Without giving any credence to the allegations made until we hear from the Chief Secretary of Rajasthan on affidavit, we restrain all the 82 mining lease/quarry holders from carrying out mining of sand and bajri unless a scientific replenishment study is completed and the

matter is fully and dispassionately considered by the Ministry of Environment, Forest and Climate Change and an environmental clearance is granted or rejected. This order will come into force with immediate effect."

It is informed the Committee that as per direction of the Hon'ble Supreme Court the proposal from Rajasthan was considered in the EAC Meeting held on January 2018 and May 2018 wherein the Committee, inter-alia, asked the PP to submit the detailed replenishment study report.

It is also informed to the Committee that in the instant case the ToR was granted on 14.09.2017 wherein it was explicitly mentioned at ToR point no 2 that detailed replenishment study for the river Dudgarh is required. The PP then applied for grant of EC on 27.04.2018 and proposal was placed in EAC Meeting held on 14-15 May, 2018 wherein the Committee **returned the proposal in present form** as the proposal was pre-mature and also issued show cause notice to the consultant. In the minutes of the meeting the Committee explicitly mentioned that "a) *The mining lease is on non-perennial river bed and due to this additional condition was prescribed in the ToR granted for this project. The PP did not conduct the replenishment study and prepared mining plan get it approved from DMG and conducted public hearing. As the replenishment study was not conducted, the basic purpose of the appraisal and decision making process was failed. Thus, the committee was of the view that proposal submitted by the PP is pre-mature at this stage, **and without replenishment study report it is difficult to ascertain the quantity of the mineral that could be allowed for the extraction.** The Committee takes it seriously that consultant and PP was aware of the facts that replenishment study, initial level of the mining lease and sections at regular interval are required for the appraisal of the project still they did not conduct the replenishment study and submitted a pre-mature proposal to the Committee."*

It is also informed to the Committee that there are other mining leases in this area for which ToR was issued by the Ministry. In those cases, the Ministry after seeking comments of the State Government decided to reduce the production capacity which in line with decision already taken by the Ministry in case of proposal from Rajasthan. The Committee also specifically mentioned in the ToR that "A Sub-Divisional Committee comprising of Sub-Divisional Magistrate, Officers from Irrigation department, State Pollution Control Board or Committee, Forest department, Geology or mining officer , revenue department shall visit the site and make recommendation on suitability of site for mining or prohibition thereof after (a) identification of the areas of aggradations or deposition where mining can be allowed; (b) identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited; (c) verify the mining lease boundary; (d) verify the area of the mining lease; (e) suggest the route for transportation of the mineral so that to cause minimum impact on the nearby habitation& agricultural fields; (f) identify the safety zone/restricted area and the area that can be consider for mining after excluding the area as per recommendation of EAC , after considering the other restrictions mentioned in the Sustainable Sand Mining Management Guidelines 2016, S.O. 141(E) dated 15.01.2016, Letter of Intent & District Survey Report; (g) finalize the specific gravity of the material to be mined by the mining lease holders; (h) proposed location for the installation

weigh bridge; (i) verification of the initial level of the mining lease already collected by the PP; (j) verification of the baseline air quantity data collected by the PP and any other point to be considered for the protection environment and health of the nearby habitation. Recommendation of the Committee needs to be annexed with EIA/EMP Report.”

The Committee did not find any reason which has restricted the project proponent for carrying out post-monsoon replenishment study. The PP has sufficient time for the same, even the EAC has reminded the PP for the same in its meeting held during May 2018. The then consultant was also given show cause notice for submitting a pre-mature proposal. But still the PP has not conducted the post monsoon survey. The Consultant also did not refer to the earlier recommendation of the EAC and uploaded a pre-mature proposal for the consideration by the EAC.

The Committee observed that submission of wrong information, uploading of incomplete information, not submitting the required documents, submitting the misleading facts during the appraisal of the proposal is an un-professional behavior of the consultants. The NABET Accredited Consultants are entrusted to assist the Committee in taking a decision on the various environmental issues associated with the proposal. Thus, Committee is of the view that consultant should be warned for the same.

Based on the discussion held, documents submitted and after considering the above facts the Committee **deferred the proposal** and is of the view that the same can only be considered after submission of the following information as an **addendum to EIA Report**:

- 1) Actual Replenishment Study based on pre-monsoon and post monsoon data needs to be submitted within 15 days.
- 2) The PP should confirm the capacity of the tippers to be used. In case it is different from what mentioned in mining plan and EIA Report then PP needs submit the number of trips, traffic study, emission rate and air quality modeling for the same.
- 3) The Budget of EMP needs to be revised after including the cost of plantation, manpower used for implementation of EMP, cost of water tanker having mist generator cannon attachment to be used for dust suppression.
- 4) The Committee has observed that PP has selected large area for plantation but in order to monitor the same the PP should submit the detailed plantation plan which clearly mention the name, address, geo-location and photograph of school, Panchayat Bhawan, Community Center and Public Health Centre where plantation shall be carried out. In addition to this PP should submit the length & geo-locations of roads along which plantation will be carried out. The PP should clearly bring out the number of saplings, area to be covered under plantation in each of these locations. The Committee also suggested that PP should carry out plantation of vetiver grass in 7.5 meter of the safety zone around the lease boundary to protect the banks of the river. The budget for plantation shall be included in the EMP.

- 5) The Wildlife Conservation Plan has already been approved and PP should confirm whether the amount already approved has been deposited in the Government account. In addition to this of approval of revised conservation plan also need to be submitted.
- 6) Previously committee asked the PP to verify the wind rose diagram but it has observed that the same not has been verified and changed. The Committee also observed that although PP has not submitted the Cluster Certificate but there are other mining leases within 500 meters of this mining lease. Thus, air quality modeling (worst & control case) and traffic study needs to be done considering the maximum production capacity of all other mining leases in the cluster and impact and mitigative measures needs to be suggested. The PP should submit the EMP for entire cluster,so that Committee can decide on the quantity of the material that can be permitted for this mining lease. The line source model should be run to show the impact zone of the both side of the road and mitigative measures to be adopted by the PP.
- 7) The Committee observed that amount proposed by PP for construction of class in room is just Rs 90,000 which is not a feasible estimate. Thus budget under CER& EMP needs to be revised considering the issues raised during public hearing.
- 8) The PP needs to submit 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.
- 9) A Sub-Divisional Committee comprising of Sub-Divisional Magistrate, Officers from Irrigation department, State Pollution Control Board or Committee, Forest department, Geology or mining officer , revenue department shall visit the site and make recommendation on suitability of site for mining or prohibition thereof after (a) identification of the areas of aggradations or deposition where mining can be allowed; (b) identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited; (c) verify the mining lease boundary; (d) verify the area of the mining lease; (e) suggest the route for transportation of the mineral so that to cause minimum impact on the nearby habitation & agricultural fields; (f) identify the safety zone/restricted area and the area that can be consider for mining after excluding the area as per recommendation of EAC , after considering the other restrictions mentioned in the Sustainable Sand Mining Management Guidelines 2016, S.O. 141(E) dated 15.01.2016, Letter of Intent & District Survey Report; (g) finalize the specific gravity of the material to be mined by the mining lease holders; (h) proposed location for the installation weigh bridge; (i) verification of the initial level of the mining lease already collected by the PP; (j) verification of the baseline air quantity data collected by the PP and any other point to be considered for the protection environment and health of the nearby habitation. Recommendation of the Committee needs to be annexed as addendum to EIA/EMP Report.

(2.23). Hatgacha (JL No. 1)–Jethia (JL No.-4) Black Stone Mine with proposed production capacity 0.8 Million TPA (ROM) by M/s West Bengal Mineral Development and Trading Corporation Ltd., located at village; Hatgachia, P.s.-Mohammad Bazar, Mouza-Jethia, District-Birbhum, West Bengal (MLA 71.20 ha) (File No. J-11015/379/2015-IA.II(M); Proposal No. IA/WB/MIN/62270/2015) –Re-Consideration for EC

The proposal of M/s West Bengal Mineral Development and Trading Corporation Ltd. is for the mining of Black Stone Mine with proposed production capacity of 0.8 Million TPA (ROM). The mine is located at Hatgachia, P.s.-Mohammad Bazar, Mouza-Jethia, District-Birbhum, West Bengal. The proponent informed that the lease area is mostly flat, involving no forest land. The lease arealies between Latitude: 240 06' 54.55" to 240 07'16.78" Nand Longitude: 870 35' 20.00" to 870 36' 0.85" E.

The proponent submitted that the Mining lease was granted in favour of M/s West Bengal Mineral Development Mineral Development & Trading Corporation on 16.12.2010, vide letter no. 1021-CI/O/MM-42/10/Mines for a period of 20 years.

The proponent mentioned that the mining plan was approved by the Office of the Chief Mining Officer, Asansol, Dist. Burdwan, West Bengal vide Memo. dated 28th July, 2014 and as such, mining plan of Hatgacha Jethia mines is prepared with an envisaged production of 0.8 million tonnes per year. **However, the proponent did not submit the copy of the approved mine plan.** Opencast method of mining will be adopted with drilling & blasting, on single shift basis with the deployment of 2.5m³ excavator. ROM produced from the mine will be fed into 200 TPH crushing unit for sizing and sized black stone will be loaded manually for dispatch to the consumers.

The proponent submitted that the public hearing was conducted on 09.09.2016 at 11.30 AM in the premises of Bharkata G.P. Office, Dist. –Birbhum, West Bengal and was presided over by Dr. Uma Sankar S, IAS, ADM, Birbhum. The proponent submitted that the total project cost is estimated to be Rs. 14.32 crores and there is budgetary provision of Rs. 150 lakhs towards environmental protection measures. There is no National Park, Biosphere Reserve or Eco-sensitive Zones, within 10 km radius of the lease area.

The proposal was earlier considered by the EAC in its meeting held during 20-21 March 2017 for consideration of EC. The Committee **deferred** the proposal for want of requisite information. The proponent submitted the information online and the proposal was again reconsidered in the EAC meeting held on 29-30 August, 2017. Based on the discussion committee deferred the proposal and was of the opinion that the proposal can be reconsidered after the proponent submits the following;-

- a. Mitigation Plan to reduce the amount of dust to be generated from the crusher.
- b. Need based survey of the project affected families.
- c. Occupational Health and Safety Plan
- d. Hazard Identification and Risk Assessment Plan
- e. Mineralogical Study of Blackstone to determine the concentration of free Silica/Crystalline Silica
- f. A letter from the State Mines and Geology department revalidating the LoI.

PP vide letter no MDTC/P-32(III)/1111 dated 23rd November, 2018 had submitted the information, Accordingly the same was considered in the EAC in its meeting held during 22-23, January, 2019 wherein the Committee deliberated the length of the information submitted by the PP and noted that **PP did not submit the requisite information as sought by the EAC's held during 29-30 August, 2017.**

The Committee asked the representatives of M/s West Bengal Mineral Development and Trading Corporation Ltd. whether they have read the reports before coming to the EAC. The representatives of M/s West Bengal Mineral Development and Trading Corporation Ltd. has mentioned that they had read the report. The Committee noted that the PP/Consultant have fails to submit the adequate EIA/EMP report as per Appendix-III of EIA notification, 2006 and the details of TOR compliances. The Committee is therefore **returned the proposal in the present form** and the **Committee opined that as the Consultant has provided the inadequate information, accordingly necessary action against the consultant may be initiated by the Ministry.**

(2.24). Narayanposhi Iron and Manganese Ore Mine of M/s Aryan Mining & Trading Corporation Pvt. Ltd. for enhancement of Iron Ore from 3.0 Million TPA to 6.0 Million TPA (ROM) and existing 0.036 Million TPA Manganese ore and establishment of Beneficiation Plant with capacity of 2.0 Million TPA along with crusher and screening plant within the mine lease area, located at villages of Koira & Kashira and Kathamala RF, Tehsil Koira, District Sundargarh, Odisha (MLA 349.254 ha) (File No. J-11015/288/2008-IA.II(M); Proposal No. IA/OR/MIN/8345/2008) (Consultant: Creative Engineers & consultants)– Re-Consideration of EC

The proposal of M/s. Aryan Mining & Trading Corporation Pvt. Ltd. (AMTC) is for expansion of iron ore production from 3.0 MTPA to 6.0 MTPA (ROM) and existing 0.036 MTPA Manganese ore and establishment of Beneficiation Plant with capacity of 2.0 Million TPA along with crusher and screening plant within the mine lease area. The mine lease area is located in the villages of Koira & Kashira and Kathamala RF, Tehsil Koira, district Sundargarh, Odisha. The lease area is falls under latitude 21° 54' 46.07" - 21° 56' 23.08" North and Longitude 85° 13' 41.22" - 85° 14' 55.00" East and falls under 73 G/1 & 73 G/5. The area is marked by undulating hills with altitudes varying from 545m to 640m above MSL. General slope of the area is towards north. The lease area is easily approachable. NH-215 is passes through the lease area; one side connected to Rajamunda & other side to Panikoili. Barbil is 37 km from the lease area and Koira is only 1.2 Km form lease area. Barsuan, the nearest railway siding, is located at a distance of 30 km from the lease area. The PP also presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The proposal of EC was earlier considered by the Expert Appraisal Committee in its meeting held during **November 15-16, 2018** wherein the Committee, after detailed deliberations, **deferred** the proposal and sought the following requisite information: -

- (i) The Committee observed that the mine lease is valid only upto 31.03.2020 and the PP has proposed the enhancement of Iron ore from 3 Million TPA to 6 Million TPA and establishment of beneficiation plant with capacity of 2 Million TPA within the mine lease area. The Committee observed that the time for expiry of the mining lease is very less and PP needs to submit the time required for achieving the peak production after obtaining clearance from the Ministry because there are other statutory clearances such as CTO etc., needs to be obtained before mining for the expanded capacity. In addition to this PP needs to submit the month wise production plan (eg. Month 1, Month 2....) for proposed production capacity of Ore.
- (ii) The Committee noted that the PP has used the ISCST model for predication of impact of the project on the air quality of the area. Air Quality modelling along with incremental ground level concentration were measured and the predicted incremental concentrations ranged from <0.5 to 5.0 micro gram per cubic meter for PM₁₀, <0.5 to 2.5 micro gram per cubic meter for PM_{2.5}, <0.5 micro gram per cubic meter for SO₂, <0.5 to 5.8 micro gram per cubic meter for NO_x, <0.5 to 4.5 micro gram per cubic meter for CO. The Committee is of the view the PP needs to submit the detailed parameters used in the model as PP has proposed the enhancement of Iron ore from 3 Million TPA to 6 Million TPA, however, the incremental ground level concentrations seems less. In view of the above PP needs to redo the modeling and submit the details with inputs on Air Quality modelling along with incremental ground level concentration due to mining and allied activities along with ore transportation on account of additional vehicles.
- (iii) PP needs to submit the schedule for the installation of beneficiation Plant as the mine lease is valid upto only 31.03.2020.
- (iv) The Committee observed that the flow Sheet of the beneficiation Plant submitted is not adequate and PP needs to submit the detailed flow sheet of Beneficiation plant along with mass/water balance.
- (v) The Committee observed that the details of Court cases with present status w.r.t. EC and CTO violations has to be submitted along with documentary proof.
- (vi) The Ministry has earlier asked the State Government vide letter dated 31.01.2011 to initiate the action against PP under the section 19 of E (P) Act, 1986 w.r.t. earlier violations. The actions are not available in the project file. In view of this PP/State Government needs to submit the details of actions to the Ministry's letter dated 31.01.2011 needs to be submitted.
- (vii) The Occupational Health Surveillance report needs to be submitted by the PP.
- (viii) The Committee has deliberated the point wise compliance of Environmental Clearance. The report inter- alia mentioned that the project authority has complied or are in process of complying with the conditions stipulated by the Ministry. The certain

information/action plan have been sought on the following points (i) It is required to increase the green belt area by planting more plants during ongoing monsoon period and also put stress to achieved optimum plantation density i.e. 2500 plant per ha in plantation are/non-plantation area including safety zone. (ii) It is required to clean the all rain water harvesting structure/ pit before and after the monsoon, (iii) It is required to maintained the garland drain, settling tank etc. all around the OB area etc. on regular basis. The Committee deliberated the issues raised by the Regional Office Bhubaneswar and is of the view that PP needs to submit the actions made by the PP after inspection/action plan on the issues flagged by the RO.

- (ix) The PP needs to implement the recommendations and necessary arrangement to be made to arrest "zero dust re-suspension".
- (x) The Committee observed that as per the recommendations of NEERI report the State Government has to complete the SOTM within 5 years and as the EC capacity is 6 Million TPA, therefore, SOTM 1 may be applicable to this project and the Ore transport mode should be 100% by private railway siding or convey or belt up to public railway siding or pipeline for captive mines and 70 % for non-captive mines. In this context PP submitted that they abide the SOTM system as a when guideline form by the Government of Odisha in this regard. The Committee ask the PP to submit the development on the SOTM, if any, made by the Government of Odisha.
- (xi) PP needs to resubmit the action plans on the recommendations of the report of carrying capacity study.
- (xii) The PP needs to submit how the they will reduce the water consumption over the years. Target for rain-water harvesting and reduction in water use needs to be explored and submitted.

In this context, the Project Proponent has submitted the information and accordingly the proposal was reconsidered in this present meeting. The details deliberations are as below:

- (i). PP reported that the mine is already well developed and can be expanded immediately after obtaining Environmental Clearance and Consent to Operate from State Pollution Control Board. PP submitted the proposed detail month wise calendar plan for 6.00 MTPA production with drilling, blasting, excavation and machineries details.

Calendar Plan of the proposed production capacity		
Year	Month	Quantity (MT)
	April	606818
	May	606818

2019-20	June	606818
	July	381818
	August	381818
	September	381818
	October	60681
	November	60681
	December	60681
	January	60681
	February	60681
	Total	6000000

Proposed Calendar Year production	
Total Maximum Excavation as proposed in the approved Mining Plan per annum	Total Excavation per day
6.0 Million Tonne (ROM)	0.02 Million Tonne (20000 Tonne)
Note: The production will be under taken on pro-rate basis to facilitate the implementation of the FMCP	

- (ii). The PP submitted the revised Air quality modelling where Ground level concentration predication is carried out for mining & allied activities within the lease area include the ore transportation from the stack yard and also due to mineral transportation outside the lease area. PP also submitted the parameters used in the model, emission sources, emission rate, results of the Peak GLC's for various environmental parameters without and with control measures. PP submitted that the predicted maximum incremental GLC after expansion, ranged from <1.0 to 8.0 micro gram per cubic meter for PM10, <1.0 to 4.0 micro gram per cubic meter for PM2.5, <1.0 micro gram per cubic meter for SO2, <1.0 to 12.5 micro gram per cubic meter for NOx, <1.0 to 7.5 micro gram per cubic meter for CO.
- (iii). PP needs to submit the schedule for the installation of beneficiation Plant as the mine lease is valid up to only 31.03 2020. In this context, PP has submitted the schedule for installation of beneficiation plant and mentioned that they will take 14

weeks towards completion of installation, in this regard an affidavit is submitted by the proponent.

- (iv). With regard to flow Sheet of the beneficiation plant, PP submitted the detail flow sheet of Beneficiation plant along with mass & water balance. The Committee deliberated the issues.
- (v). With regard to the details of Court cases, the PP has submitted that the court case has been filed before the court of SDJM, Bonai by the Collector, Sundargarh vide case no. 43/2013. Interim stay order passed by the Hon'ble High Court of Odisha, dated 31.10.2014. The matter already discussed in Common Cause and as per the order of the judgment made by the Hon'ble Supreme Court dated 02.08.2017 in the matter of W.P.(C) 114/2014, dated, DDM, Koira has raised the demand under section 21(5) of MMDR Act, 1957 on EC and FC violations and the same has been complied by the PP. PP has also mentioned that with regard to CTO violation, Revision petition has been filed before the Ministry of Mines, Govt. of India against the notice served by DDM, Koira, Odisha vide no. 5542/Mines, dated 26.09.2017 for excess production of approved limit under Mining Plan and Consent to Operate in pursuance to judgement made by the Hon'ble Supreme Court vide case no. 114/2014, dated 02.08.2017. As per the Hearing held on 30.10.2018 and the order was reserved and finally disposed as per the order dated 26.11.2018. The Revision Authority set-aside the State Govt. order and directed the State Govt. to hear the matter afresh and pass a detailed and reasoned order. PP submitted the details of documentary proof with respect to status of EC & status of CTO violation.
- (vi). The PP has submitted that the Case has been filed before the court of SDJM, Bonai by the Collector, Sundargarh vide case no. 43/2013. Interim stay order passed by the Hon'ble High Court of Odisha, dated 31.10.2014. The matter already discussed in Common cause and as per the order of the Judgement made by the Hon'ble Supreme Court 02.08.2017 in the matter of W.P.(C) 114/2014, dated, DDM, Koira has raised the demand under section 21(5) of MMDR Act, 1957 on EC and FC violations and the same has been complied. PP submitted the documentary proof regarding action taken by the State Govt.
- (vii). The PP submitted the details of occupational health and safety management system implemented by AMTC along with health surveillance report.
- (viii). The Committee has deliberated the point wise compliance of Environmental Clearance in its earlier meetings. The reports inter- alia was mentioned that the project authority has complied or are in Process of complying with the conditions stipulated by the Ministry. The following information/action plan have been sought by the EAC. In this context, the PP submitted that, subsequent to inspection of Regional office of MoEF&CC, they have prepared action plan as desired by the inspection officer and the same was submitted on dated 09.11.2018. The details are as below:-

S.No.	Observation of EAC	Comments of PP
(i)	It is required to increase the green belt area by planting more plants during ongoing monsoon period and also put stress to achieve optimum plantation density i.e. 2500 plant per ha in plantation area/non-plantation area including safety zone.	PP has reported that so far 153803 Nos. of saplings were planted over an area of 40.971ha within the ML area including dump & safety zone with a plantation density of about 2500 plant per ha. In addition, 76464 Nos. of saplings were planted over an area of 10.305 ha outside the ML area & 8085 Nos. of saplings were planted/distributed to nearby villages, schools etc. Further it is ensured that PP will do plantation @2500 saplings in upcoming monsoon in line with approved mining plan.
(ii)	It is required to clean the all rain water harvesting structure, pit before and after the monsoon,	PP reported that there is general practice to clean the rain water harvesting structures/pit before & after monsoon. It will be continued as suggested.
(iii)	It is required to maintained the garland drain, settling tank etc, all around the OB area etc, on regular basis. The Committee deliberated the issues raised by the Regional Office Bhubaneswar and is of the view that PP needs to submit the actions made by the PP after inspection/action plan on the issues flagged by the RO,	PP also reported that they have been maintaining the garland drain, settling tank around the dump by way of de-silting before & after monsoon, stone pitching on regular basis and the same will be continued as suggested.

- (ix). With regard to implementation of the recommendations and necessary arrangement to be made to arrest "zero dust is-suspension, the PP has informed that, NH-215 passes through the lease area and is under four lanning. The road is being constructed as per the IRC guidelines with proper drainage system with fencing & plantation. Apart from that 200m concrete road has been made from the exit gate towards stack yard. PP submitted that, for the effective dust suppression in haulage road fixed - auto water sprinkling arrangement system installed for 2.4 Km. Further additional 3.0 KM length has been proposed. Also 4 numbers of mobile water tankers engaged for sprinkling on the mine benches, mine haul road, loading and unloading and transfer points. Additional 1 no water tanker is proposed for expansion. PP informed that they have proposal to use

additives towards effective dust suppression on the mines haulage road. This will further help towards reduction in water consumption. The application will be with due conducting the experiment on availability of certified additives. PP informed that vacuum cleaning will be adopted as per the instruction from Authorities. After all whatever the instructions or recommendations will come from MoEF&CC/State Govt. of Odisha, they will abide by it.

- (x). With regard to the recommendations of NEERI report on implementations to complete the SOTM within 5 years. PP informed that, the first meeting was conducted by all the Govt. respective departments on dated 21.06.2018 under chairmanship of Chief Secretary, Odisha. All the recommendations of NEERI towards its implementation were vividly discussed among team. In the meeting it has been decided to form District level Committees for the implementation of Suggested Ore Transport Mode (SOTM) under the chairmanship of District Collectors to decide on the modalities for implementation. It is also decided that, Constraints, if any, in implementation of such recommendations may be reported by the DLC's to the Steel & Mines department. In the meeting recommendation with regard to new railway lines and railway sidings was forwarded to the Ministry of Railway/Railway Board through Commerce & Transport Department for appropriate action. PP informed that, a meeting was conducted by Collector Sundargarh on dated 03.07.2018 with all lessees regarding safe transportation and prevention of pollution of minerals during transportation from mining area to main road and railway sidings.
- (xi). The PP needs to resubmit action plans on the recommendations of the carrying capacity study. In this context the PP submitted the action plans on the recommendations of the carrying capacity in details. The Committee deliberated the same.
- (xii). The PP needs to resubmit how they will reduce the water consumption over the years. Target for rain-water harvesting and reduction in water use needs to be explored and submitted. In this context, the PP informed and submitted the proposed beneficiation plant process which is totally closed circuit with zero effluent discharge. Nearly 95-97% water can be recovered from the circuit and will recirculate in the circuit. PP submitted the details of rain water harvesting process already adopted and will adopt in future. PP also informed that they have the proposal to use additives towards effective dust suppression on the mines haulage road.

The Committee deliberated the proposal and based on the information submitted by PP, the Committee **recommended** the Proposal for grant of Environmental Clearance for enhancement of Iron Ore from 3.0 Million TPA to 6.0 Million TPA (ROM) and existing 0.036 Million TPA Manganese ore and establishment of Beneficiation Plant with capacity of 2.0 Million TPA along with crusher and screening plant within the mine lease area along with Standard EC conditions as per **Annexure-III**.

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 a recommendation which needs to be implemented by the State Govt. of Odisha and Project Proponent. Based on detailed deliberations on the recommendations of the carrying capacity study report, the Committee has also **recommended the following specific conditions viz.**

- 1) 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.
- 2) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.
- 3) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.
- 4) 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.
- 5) 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.
- 6) 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.

- 7) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.
- 8) 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.
- 9) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.
- 10) 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.
- 11) 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.
- 12) 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.

13) 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.

14) **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.

- 15) **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.
- 16) **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.

17) **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.

- 18) **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.
- 19) **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.

- 20) **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.

21) **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.

22) **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).

(2.25). Expansion of production of Iron Ore from 5.3 million TPA (4.3 MTPA ROM Iron Ore+ 1.0 MTPA of low grade iron ore from old dump within lease area) to 9.0 million TPA (8.0 MTPA ROM+1.0 MTPA of low grade iron ore from old dump within lease area) in respect of Nadidih Iron & Manganese Mines of M/s Bonai Industrial Co. Ltd., located at village Nadikasira & Rengalbeda, Tehsil-Koira, District-Sundargarh, Odisha (MLA 73.855 ha) (File No. J-11015/135/2012-IA.II(M); Proposal No. IA/OR/MIN/83339/2012) (Consultant: Ecomen Laboratories Pvt. Ltd.) – Re-Consideration of EC

The proposal of M/s Bonai Industrial Co. Ltd. is for Expansion of production of Iron Ore from 5.3 million TPA (4.3 MTPA ROM Iron ore +1.0 MTPA of low grade iron ore from old dump within lease area) to 9.0 million TPA (8.0 MTPA ROM +1.0 MTPA of low grade iron ore from old dump within lease area) in the mine lease area of 73.855 ha. The mine lease area

is located at village Nadikasira & Rengalbeda, Tehsil - Koira, District- Sundargarh, Odisha. The area is bounded by Latitude: 21° 57' 49" N – 21° 58' 25" N, Longitude: 85° 15' 32" E – 85° 16' 13" E in Survey of India Toposheet no. 73 G/5. The PP also presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS. It is a Category 'A' project as the mine lease area is located within 5 km of interstate boundary.

The proposal of EC was earlier considered by the Expert Appraisal Committee in its meeting held during **November 15-16, 2018** wherein the Committee, after detailed deliberations, **deferred** the proposal and sought the following requisite information: -

- (i) The Committee observed that the mine lease is valid only upto 31.03.2020 and the PP has proposed the Expansion of production of Iron Ore from 5.3 million TPA (4.3 MTPA ROM Iron Ore+ 1.0 MTPA of low grade iron ore from old dump within lease area) to 9.0 million TPA (8.0 MTPA ROM+1.0 MTPA of low grade iron ore from old dump within lease area). The Committee observed that the time for expiry of the mining lease is very less and PP needs to submit the time required for achieving the peak production after obtaining clearance from the Ministry because there are other statutory clearances such as CTO etc. needs to be obtained before mining for the expanded capacity. In addition to this PP needs to submit the month wise production plan (eg. Month 1, Month 2....) for proposed production capacity of Ore.
- (ii) Project Proponent reported that the baseline data have been carried out during summer season (March to May 2018). The predicted incremental concentration for PM₁₀ is NIL to 3.29388 µg/m³, for PM_{2.5} the incremental concentration is from NIL to 1.02569 µg/m³, and for NO₂ the incremental concentration is from NIL to 0.00425 µg/m³. PP has not predicted the incremental concentration for SO₂ parameter. The Committee is of the view that the proposed production of mine is almost twice; however, the predicted incremental concentration for the parameters are very less and suggested that PP needs to re-calculate the prediction for all the parameters including SO₂ and submit before the EAC for further deliberations. In view of the above PP needs to redo the modeling and submit the details with inputs on Air Quality modelling along with incremental ground level concentration due to mining and allied activities along with ore transportation on account of additional vehicles.
- (iii) The Committee has deliberated the point wise compliance of Environmental Clearance submitted by the Regional Office of the Ministry. The report inter- alia mentioned that the project authority has complied or are in process of complying with the conditions stipulated by the Ministry. The PP was requested to submit the digital processing of entire lease area report within stipulated time period. As digital Processing of entire lease area is conducted once in three years. The Committee deliberated the issues raised by the Regional Office Bhubaneswar and is of the view that PP needs to submit the actions made by the PP after inspection/action plan on the issues flagged by the RO.
- (iv) The Committee observed that as per the recommendations of NEERI report the State Government has to complete the SOTM within 5 years and as the EC capacity is 9

Million TPA, therefore, SOTM 1 may be applicable to this project and the Ore transport mode should be 100% by private railway siding or conveyor belt up to public railway siding or pipeline for captive mines and 70 % for non-captive mines. In this context PP submitted that It is not feasible to construct conveyor belt system for transport of iron ore from the mine to different Railway sidings due to problem in acquisition of private (including ST land), involvement of forest land, involvement of huge expenditures on this account as well as less availability of time since the mining lease period is valid upto 31.03.2020 only. The Committee ask the PP to submit the development on the SOTM, if any, made by the Government of Odisha.

- (v) The Occupational Health Surveillance report needs to be submitted by the PP.
- (vi) The PP needs to implement the recommendations of the report of carrying capacity study and necessary arrangement to be made to arrest "zero dust re-suspension".
- (vii) The Committee observed that as per the recommendations of NEERI report and its TOR condition no. 6, the PP needs to construct cement concrete road from mine entrance and exit to the main road with proper drainage system and green belt development within one year. PP informed that it is not feasible at this stage as the mining lease period will expire on 31.03.2020 to construct cement concrete roads from the exit point of the mine to the main road since it involves considerable expenditure as well as the time required to obtain the approval for use of forest land for the said purpose. The Committee deliberated the issues and is of the view that PP needs to submit action plan on the recommendations of the carrying capacity study.
- (viii) PP needs to submit the details of financial Assurance in the form Bank Guarantee during approval of Review of the Mining Plan for implementation of FMCP under Rule-24 of Mineral Conservation and Development Rules, 2017.
- (ix) The report inter-alia includes the presence of two schedule-I species namely Peacock & Python. PP needs to submit the species specific conservation plan for Schedule-I species along with the budgetary provisions.
- (x) Details of application made to CGWA for approval of intersection of ground water needs to be submitted.
- (xi) The PP needs to submit how the they will reduce the water consumption over the years. Target for rain-water harvesting and reduction in water use needs to be explored and submitted.
- (xii) PP needs to submit the details of the activities and budget earmarked for Corporate Environmental Responsibility (CER) which shall be as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 and its action plan on the activities proposed under CER.

(xiii) PP needs to resubmit the action plans on the recommendations of the report of carrying capacity study.

In this context, the Project Proponent has submitted the information and accordingly the proposal was reconsidered in this present meeting. The detailed deliberations are as below:

(i) The PP has reported that they will achieve peak production from the month of April, 2019 after getting EC and other statutory clearances. The production details submitted by the PP shows that total excavation for the year 2019-20 will be 1,08,79,025 metric tons comprising of 80,00,000 metric tons of ROM ore and 28,79,025 metric tons of over burden/waste materials. During the same year i.e.; 2019-20, the PP will re - handle 10,00,000 metric tons of low grade ore from old dump to obtain 4,00,000 metric tons of iron ore and the balance 6,00,000 metric tons will be waste material. Thus, the total handling during 2019-20 will be 1,18,79,025 metric tons, out of which the ore production will be 84,00,000 metric tons and the balance 34,79,025 metric tons will be as waste. The PP has informed that the total handling of 1,18,79,025 metric tons will be achieved during the period April, 2019 to February, 2020 (11 months) and that the tentative monthly handling of material will be 10,79,912 metric tons which will yield a production of 7,63,637 metric tons of iron ore and 3,16,275 metric tons of waste material.

Table 1: Excavation from mine pit (2019-2020)			
Month(s)	Ore production (MT)	OB/IB/SB generation (MT)	Total Excavation (MT)
April	727273	261729	989002
May	727273	261729	989002
June	727273	261729	989002
July	727273	261729	989002
August	727273	261729	989002
September	727273	261730	989003
October	727273	261730	989003
November	727273	261730	989003
December	727272	261730	989002
January	727272	261730	989002
February	727272	261730	989002

Total	8000000	28,79,025	1,08,79,025
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Table 2: Rehandling from waste dump-A (2019-2020)			
Month(s)	Ore production (MT)	Waste generation (MT)	Total Rehandling (MT)
April	36363	54546	90909
May	36363	54546	90909
June	36363	54546	90909
July	36363	54546	90909
August	36364	54546	90910
September	36364	54545	90909
October	36364	54545	90909
November	36364	54545	90909
December	36364	54545	90909
January	36364	54545	90909
February	36364	54545	90909
Total	4,00,000	6,00,000	10,00,000

- (ii) Project Proponent has submitted the Air quality modeling with incremental ground level concentration including SO₂ due to mining and allied activities along with ore transportation on account of additional vehicles, which shows that the Maximum Predicted Incremental Concentration ($\mu\text{g}/\text{m}^3$) for PM₁₀ is 7.3435 micro gram/m³ for Arjuna Munda Basti and minimum 2.9409 micro gram/m³ for Kashira village. Highest Predicted Incremental Concentration ($\mu\text{g}/\text{m}^3$) for PM_{2.5} at Arjuna Munda Basti is 2.37244 micro gram/m³ and minimum is 1.04196 micro gram/m³ at Badipada. For NO₂ highest predicted incremental concentration is at Kendudihi village which is 0.0425 micro gram/m³ and minimum is at Badipada village which is 0.00100 micro gram/m³. For SO₂ highest predicted incremental concentration is at Arjun Munda Basti i.e., 0.24709 micro gram/m³ and lowest predicted incremental concentration is at Jhirapani which is 0.00187 micro gram/m³. All values are noticed to be well within the stipulated limits of CPCB for Rural and Residential areas at all locations.

- (iii) The PP has informed that they have already submitted the digital processing of entire lease area report to the Regional Office of MoEF&CC at Bhubaneswar vide their letter No. BICO/ED/GEO/2018-19/105, dt.11.05.2018.
- (iv) The PP has reported that the expansion of the mine is coming under SOTM I. Project proponent informed that they have requested the State Govt. of Odisha vide letter no. BICo/ED/GEO/2018-19/631 dt. 24.11.2018 for providing information on the initiatives taken by the State Govt. for the development on the SOTM, if any. The PP has also informed that they are pursuing the matter with the State Govt. and will submit the details immediately after obtaining the required information.
- (v) The PP has submitted the Occupational Health Surveillance Report. The PP informed that they have implemented Integrated Management System as per international standard since the year 2013 for Quality, Environment, Occupational Health & Safety and Social accountability and have structured policy in this regard which is displayed at strategic locations of the mine and made available to all interested parties. Integrated Management System at mines are audited internally as per the plan and schedule of internal audit. It's implementation is also audited by external body (Certification Body-DNV) once in every six months. This mine is OHSAS 18001 : 2007 certified unit since 10.04.2013. The PP informed that the Comprehensive occupational health checkup are being done on regular basis for each and every employee irrespective of direct or contractual at the time of joining and on periodic basis to maintain surveillance on occupational health standard of mine workers. Comprehensive occupational health surveillance report of all the employees including contractual workers conducted at the time of joining as well as on periodic basis for last three years has been submitted. The PP also informed that the Mine has its own equipped dispensary with Doctor, Paramedical staffs, ambulance facility etc. which caters the need of mine workers, their dependants and people of the surrounding area. All the facilities including medicine are provided at free of cost. Details of patients and treatment are documented for assessment of disease pattern and surveillance has been submitted by PP. Patient's record maintained at Dispensary at Mines level has also been submitted by PP.
- (vi) PP informed that Mine Management will make necessary arrangement to arrest "zero dust re-suspension" within three months. The PP also informed that they have received quotations from different manufacturers/suppliers and will procure vehicle mounted vacuum road sweeper within 3 months.
- (vii) The Project proponent has informed that they will construct cement concrete road from mine entry/exit point to the main road (NH 215) which covers a length of 300 mts with drainage system and green belt within one year. The PP has also submitted an undertaking in this regard.
- (viii) PP has informed that Financial Assurance in the form of Bank Guarantee for an amount of Rs. 2,21,56,500/- only for entire mining lease area over 73.855 ha @ Rs.

3,00,000/- per hectare (BG of Rs. 2,03,10,125/- on dt. 19.05.2017 & BG of Rs. 18,46,375/- on dt. 02.04.2013) has been submitted to Indian Bureau of Mines for implementation of FMCP under Rule-24 of Mineral Conservation and Development Rules, 2017. The PP has submitted photocopy of the BG.

- (ix) The has submitted the Site Specific Conservation Plan for schedule-1 species namely; peacock and python detailing their habitat behavior, threats & conservation measures and budgetary provision of Rs.123 lakhs for core & buffer zone. The PP has informed that they have already deposited a fund of Rs.91.0 lakhs to the Forest Dept. for implementation of Conservation Plan in the buffer zone. The PP also reported that they have already spent Rs.75.0 lakhs against the budgetary provision of Rs.32 lakhs for implementation of conservation plan in the core zone.
- (x) PP has informed that the application for issue of NOC to abstract ground water for the mine has already been submitted online vide application no. 21-4/2146/OR/MIN/2018 dated 14.11.2018 to CGWA for approval of intersection of ground water. PP also informed that The CGWB, Bhubaneswar has already forwarded the application to CGWA, New Delhi which is under consideration for approval.
- (xi) Project Proponent has informed that they have taken various measures for reduction of water consumption in the mine. For reduction in fresh water consumption, the treated water from the STP is being utilized for Road sprinkling in the mine. Specific water consumption is maintained to minimum by installation of time switch in water pipeline used in sprinkling on haul road. Fogging system has been introduced to control dust with minimum water requirement in crushing and screening plants. PP has also informed that Application of dust binder such as Hygroscopic $MgCl_2$ or any other suitable chemical mainly having safer (Lethal dose 50) LD50 value will be utilised to reduce dependence on fresh water consumption over the year. Rainwater harvesting has already been done in the mine. A structure of 16,485 m³ capacity has been developed by collecting runoff water from strategic point in the mine during rainy season. Besides settling tanks in strategic locations have been constructed which also recharge the ground water as well used for water sprinkling purpose in non rainy days.
- (xii) Project proponent has submitted details of activities with budgetary allocations for Corporate Environmental Responsibility (CER). As mentioned in the report , the total proposed expenditure in CER is Rs. 157.15 lakhs out of which the major expenditure being construction of a bridge over Karo River (Rs.60.0 lakh), water sprinkling on haul roads (Rs.45.00 lakh), maintenance of existing drinking water supply facility in surrounding villages, (Rs.14.60 lakhs) educational facilities in Schools – free supply of School uniform, study kits, financial assistance etc. (Rs.13.35 lakhs), health care facilities for villagers (Rs7.20 lakhs), etc.
- (xiii) The PP has re-submitted the action plan on the recommendations of the report of carrying capacity. Some of the major issues like implementation of SOTM, development of parking plaza, construction of cement concrete road from exit/entry

gate of mine to main road NH-215, necessary arrangement for "Zero dust re-suspension, continuous monitoring of different environmental parameters, Air, Water, noise, etc. has been mentioned in the report along with other issues. The PP has informed that they have requested the State Govt. to convey the status of implementation of SOTM, they have agreed to construct a concrete road from mine exit/entry gate to NH215. PP has committed to procure a vehicle mounted vacuum road sweeper for zero dust re-suspension; parking place is already available within the mine. PP has requested the State Govt. to develop a common parking plaza for cluster of mines from DMF fund. The PP has also reported that they are monitoring the environmental parameters and maintaining the same within prescribed limits. The PP also informed that they have applied to CGWA for obtaining NOC for abstraction of ground water. The PP informed that they have implemented adequate surface run-off management system inside the lease area to make the mine zero discharge. The dumps are covered with geo-textile coir and grasses with plantation on them. The toes of the dumps are surrounded with retaining wall and garland drain terminating to settling tanks. The PP informed that personnel working in the mine are provided protective respiratory devices and are made educated on safety and health aspects by periodically in-house training, OHS programmes are conducted periodically by team of professional doctors engaged by the PP, annual environment statement on environmental sustainability achievement is reported annually to Regional office of MoEF&CC and SPCB and also posted in company's website.

The Committee deliberated the proposal and based on the information submitted by PP, the Committee **recommended** the Proposal for grant of Environmental Clearance for **Expansion of production of Iron Ore from 5.3 million TPA (4.3 MTPA ROM Iron Ore+ 1.0 MTPA of low grade iron ore from old dump within lease area) to 9.0 million TPA (8.0 MTPA ROM+1.0 MTPA of low grade iron ore from old dump within lease area)** along with Standard EC conditions as per **Annexure-III**.

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 recommendations which needs to be implemented by the State Govt. of Odisha and Project Proponent. Based on detailed deliberations on the recommendations of the carrying capacity study report, the Committee has also **recommended the following specific conditions viz.**

- 1) 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.
- 2) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.

- 3) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.
- 4) 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.
- 5) 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.
- 6) 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.
- 7) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.
- 8) 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.

- 9) 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. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.
- 10) 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.
- 11) 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.
- 12) 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.
- 13) 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.

- 14) **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.
- 15) **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.

- 16) **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.
- 17) **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.

- 18) **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.

- 19) **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.

- 20) **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 outees 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.
- 21) **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.
- 22) **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).

(2.26). Mining of 38,60,000 TPA of Sand from "Nagla Rangran Block/ YNR B 14 project by M/s Tirupati Earth & Project Works Pvt. Ltd., having mine lease area 89.48 ha located at Village –Nagla Rangran, Taluka – Radaur, District – Yamuna Nagar, Haryana [File No. J-11015/76/2017-IA-II(M); Proposal No. IA/HR/MIN/66798/2017; Consultant: Enkay Enviro Services Pvt. Ltd.]- Reconsideration of EC.

The proposal is for production of 38, 60,000 TPA of Sand from mining lease area of 89.48 Ha, located in Village –Nagla Rangran, Taluka – Radaur, District – Yamuna Naga, Haryana by M/s Tirupati Earth & Project Works Pvt. Ltd. The mine area is a part of the Survey of India Topo sheet No 53G/ 1 bounded by Latitudes of 29°58"10""N to 29°59"24""N and Longitudes of 77°13"32""E to 77°14"19""E. Being a Category "A" Project as per S.O. 141(E) dated 15.01.2016 the PP vide proposal No IA/HR/MIN/66798/2017 applied online for grant of ToR on July 18, 2018 and submitted Form-1 and Pre-Feasibility Report. The proposal was considered in EAC meeting held on August 29-30th 2017 wherein the Committee recommended for grant of ToR. The ToR was issued by the Ministry, vide Lr. No. J-11015/76/2017-IA-II (M) dated 14.09.2017.

The Project Proponent applied vide proposal No. IA/HR/MIN/66798/2017 for grant of EC online on 13.04.2018 and submitted the EIA Report after conducting the Public Hearing. The proposal was placed in EAC Meeting held on 14-15 May, 2018, wherein, the Committee returned the proposal in present form due to shortcomings. The PP as directed by EAC applied again for grant of EC on 31.08.2018 vide proposal no. IA/HR/MIN/66798/2017 and the proposal was considered in the EAC Meeting held on **28-29 September, 2018** wherein the Committee deferred the proposal for want of following requisite information. The PP submitted the information on 31.10.2018 and the proposal was again placed in EAC Meeting held on **15-16 November, 2018** wherein the Committee **deferred** the proposal for want of following requisite information. The PP submitted the requisite information on 30.11.2018 and the proposal is now placed in EAC meeting held during 22-23rd January, 2019. The information submitted by the PP and the observation of the Committee are as follows:

- a) **The PP should submit the revised EIA Report after making only those corrections which are proposed by the EAC or agreed by the EAC.**

The PP submitted that EIA/EMP prepared by the former ACO remains unaltered except for the correction desired by the EAC. The Changes made in the EIA Report has been mentioned in the relevant section/para as Note. All EDS generated in the subsequent meeting have also been addressed in the relevant Section/para stated as Note.

Observation of EAC: The PP has submitted letter dated 12.06.2018 regarding change of consultant for this project from 'Vardhan Environet, Gurgaon' to 'Enkay Enviro Services Pvt. Ltd, Jaipur'.

- b) **The PP should ascertain the GLCs of various pollutants in worst case and control case scenario for the entire cluster. In addition to this PP should also bring out the GLCs of various pollutants in worst case and control case scenario for this mining lease. The PP should clearly bring out the various production scenarios at which GLCs of various pollutants will remain well within the NAAQS limits, to enable the Committee to decide on the quantity of the material that can be granted for this mining project. The PP should provide the details of the input parameters and mathematical equations used for the modeling. In addition to this impact zone on the both side of the road needs to be ascertained and mitigative measures to reduce the impact needs to be submitted.**

The PP submitted that air quality modeling has been revised with respect to production and transportation (including no of trips) using the baseline data as background emission level. AERMOD Version 7.1.0 model was used to predict changes in air quality i.e., maximum ground level concentration (GLCs) of PM₁₀, PM_{2.5}, NO_x, and CO due to the proposed mining activity. Cumulative GLC's were predicted with EMP and without EMP (Worst Case) for the proposed mining activities. United State Environment Protection Agency (USEPA-42 series) approved mathematical equations, have been used to predict emission rates for different operations in mining including the mineral transportation. The inventerisation required for AERMOD & USEPA-42 Series has been addressed. The impact on either side of the road (30m carriage way) due to tail pipe emission which will be confined to maximum 100 m variable with micro-meteorological conditions. The impact due to this will be nullified by avenue plantation.

Total expected Ground Level Concentration with EMP (Controlled Case)

Location	Ground Level Concentrations of PM₁₀ in µg/m³			
	Predicted	Background (Max.)	Total Expected	CPCB Standard

Project Site	10.98	89.8	100.8	100
Near Nagla School	2.45	97.3	99.8	100
Baheri	0.3	97.8	98.1	100
Kasimpur	<0.1	97.6	97.6	100
Lakhibas	0.2	95	95.2	100
Barson	<0.1	95.3	95.3	100

Note: The effective EMP measure considered is 75% which is inadequate to contain the emission within permissible limit during the crop burning period for which water sprinkling will be increased

Total expected Ground Level concentrations with EMP (Worst Case)

Location	Ground Level Concentrations of PM _{2.5} in µg/m ³			
	Predicted	Background (Max.)	Total Expected	CPCB Standard
Project Site	4.02	50.6	54.6	60
Near Nagla School	0.9	57.4	58.3	60
Baheri	0.1	57.2	57.3	60
Kasimpur	<0.1	57.2	57.2	60
Lakhibas	<0.1	58.6	58.6	60
Barson	<0.1	58.6	58.6	60
Location	Ground Level Concentrations of NO _x in µg/m ³			
	Predicted	Background (Max.)	Total Expected	CPCB Standard
Project Site	0.014	30.2	30.2	80
Near Nagla School	<0.1	39.3	39.3	80
Baheri	<0.1	37.5	37.5	80
Kasimpur	<0.1	37.5	37.5	80
Lakhibas	<0.1	36.4	36.4	80
Barson	<0.1	36.4	36.4	80

Location	Ground Level Concentrations of PM ₁₀ in µg/m ³			
	Predicted	Background (Max.)	Total Expected	CPCB Standard
Project Site	43.3	89.8	133.1	100
Near Nagla School	9.64	97.3	106.9	100

Baheri	0.45	97.8	98.3	100
Kasimpur	0.13	97.6	97.7	100
Lakhibas	0.43	95	95.4	100
RahibasBarsi	0.24	95.3	95.5	100

Location	Ground Level Concentrations of PM _{2.5} in µg/m ³			
	Predicted	Background (Max.)	Total Expected	CPCB Standard
Project Site	15.85	50.6	66.5	60
Near Nagla School	3.53	57.4	60.9	60
Baheri	0.2	57.2	57.4	60
Kasimpur	<0.1	57.2	57.2	60
Lakhibas	0.2	58.6	58.8	60
RahibasBarsi	0.1	58.6	58.7	60
Location	Ground Level Concentrations of NO ₂ in µg/m ³			
	Predicted	Background (Max.)	Total Expected	CPCB Standard
Project Site	0.014	30.2	30.2	80
Near Nagla School	<0.1	39.3	39.3	80
Baheri	<0.1	37.5	37.5	80
Kasimpur	<0.1	37.5	37.5	80
Lakhibas	<0.1	36.4	36.4	80
RahibasBarsi	<0.1	36.4	36.4	80

Observation of EAC: The Committee observed that the in the controlled case the location was mentioned as 'Barson' but in the worst case scenario the location is mentioned as 'RahibasBarsi'. The PP did not provide any justification for change of location name for calculating the control and worst case scenario. There are some variations in name of location but the Committee has reduced the production level from 38.6 LTPA to 19.0 LTPA to reduce the impact of mining on the air quality of the area.

Cumulative impact due to other mining activities in worst Case & Controlled Case scenario in the study area

Location	Ground Level Concentrations of PM ₁₀ in µg/m ³			
	Predicted	Background (Max.)	Total Expected (Worst Case)	Total Expected (Controlled Case)
Jathlana YNR B-12 (P. S. Buildtech)				

Near Mine Site	47.95	80.2	128.1	92.3
Village-Jathlana	21	77.1	98.1	79.8
Village- Khurdi	0.2	77.1	77.3	77.1
Village- Latifpur	0.2	78.1	78.3	78.1
Village-Madhobas	5.47	79.1	84.6	81.8
Village- Qutabpur	0.2	75.1	75.3	75.1
Pobari Block/ YNR B11 (Development Strategies India Pvt. Ltd.)				
Mine Site	10.78	76.3	87.1	79
Village - Gumthala	0.2	79.3	79.5	79.3
Village - Hasanpur	0.2	88.1	88.3	88.1
Village - Barheri	5.47	80.1	85.6	81.5
Village - Dhika Kalan	0.2	71.5	71.7	71.5
Gumthala North Block/ YNR B16 (Joginder Singh)				
Mine site	26.7	71.9	98.6	80
Gumthala	0.2	79.3	79.5	79.3
Hasanpur	0.2	88.1	88.3	88.1
HansuMajraChaugwan	0.2	86.1	86.3	86.1
Barheri	5.47	80.1	85.6	81.5
Nagli Block YNR/ B-15 (M.P. Traders)				
Mine site	26.7	88.2	114.9	96.3
Raijheri	5.47	85.4	90.9	88.1
Tabar	0.2	86.3	86.5	86.3
Model Town	5.47	85.7	91.2	87.4
Shukartal	0.2	88.8	89	88.8
M.T. Karhera Block YNR/ B13 (KawaljeetsinghBatra)				
Mine Site	16.1	85.6	101.7	91
Village Nachron	0.2	85.7	85.9	85.7
Village - Pobari	0.2	84.5	84.7	84.5
Village - Barsan	0.2	85.3	85.5	85.3
Village - Marza	5.47	84.3	89.8	87
NaglaRangran Block YNR/ B-14 (Tiruapti Earth & Project Works Pvt. Ltd.)				
Mine Site	42.64	89.8	132.4	100.8
Near Nagla School 2	5.47	97.3	102.8	99.8
Baheri	5.47	97.8	103.3	98.1
Kasimpur	0.2	97.6	97.8	97.6
Lakhibas	0.2	95	95.2	95
Barson	0.2	97.1	97.3	97.1
Location	Ground Level Concentrations of PM_{2.5} in µg/m³			

	Predicted	Background (Max.)	Total Expected (Worst Case)	Total Expected (Controlled Case)
Jathlana YNR B-12 (P. S. Buildtech)				
Near Mine Site	22.15	50.6	72.8	56.2
Village-Jathlana	7.4	48.8	56.2	50.1
Village- Khurdi	<0.1	48.8	48.8	48.8
Village- Latifpur	<0.1	45	45	45
Village-Madhobas	2.5	46.7	49.2	47
Village- Qutabpur	<0.1	45.6	45.6	45.6
Pobari Block/ YNR B11 (Development Strategies India Pvt. Ltd.)				
Mine Site	5	45.9	50.9	47.2
Village - Gumthala	<0.1	45.1	45.1	45.1
Village - Hasanpur	<0.1	46.1	46.1	46.1
Village - Barheri	2.5	39.1	41.6	40.5
Village - Dhika Kalan	<0.1	46	46	46
Gumthala North Block/ YNR B16 (Joginder Singh)				
Mine site	9.878	42.2	52.1	44.7
Gumthala	<0.1	45.1	45.1	45.1
Hasanpur	<0.1	46.1	46.1	46.1
HansuMajraChaugwan	<0.1	45.1	45.1	45.1
Barheri	2.5	39.1	41.6	40.5
Nagli Block YNR/ B-15 (M.P. Traders)				
Mine site	9.878	48.8	58.7	51.3
Raijheri	2.5	46.5	49	47.1
Tabar	<0.1	46.1	46.1	46.1
Model Town	2.5	49.4	50.9	50
Shukartal	<0.1	46.1	46.1	46.1
M.T. Karhera Block YNR/ B13 (KawaljeetsinghBatra)				
Mine Site	7.4	45.3	52.7	46.6
Village Nachron	<0.1	46.3	46.3	46.3
Village - Pobari	<0.1	48.1	48.1	48.1
Village - Barsan	<0.1	45.3	45.3	45.3

Village – Marza	2.5	45.2	47.7	45.5
NaglaRangran Block YNR/ B-14 (Tirupati Earth & Project Works Pvt. Ltd.)				
Mine Site	14.8	50.6	65.4	54.3
Near Nagla School 2	2.5	57.4	59.9	58.7
Baheri	2.5	57.2	59.7	58.6
Kasimpur	<0.1	57.2	57.2	57.2
Lakhibas	<0.1	58.6	58.6	58.6
Barson	<0.1	56.2	56.2	56.2

Observation of EAC: The Committee observed that previously in the worst case scenario the value of GLC of PM10 at mine site was recorded as 133.1 µg/m³ but in the above table the same has been mentioned as 132.4 µg/m³. The PP also mentioned that GLC of PM₁₀ taking all the mines together will be 132.4 µg/m³. There are some variations but the Committee has reduced the production level from 38.6 LTPA to 19.0 LTPA to reduce the impact of mining on the air quality of the area.

c) The PP should submit the Environmental Management Plan for the entire cluster so that the specific conditions can be formulated for the project.

An Environmental Management Plan (EMP) has been prepared for cluster to nullify the adverse impact of cluster operative mines. Few of the recommendations are given below:

- *Collective dust suppression measures and plantation will be done.*
- *Medical Check-ups and safety training will be promoted.*
- *Community forestry will be developed.*
- *Haul roads will be properly sprinkled and maintained.*
- *Periodic Environmental Monitoring will be undertaken.*
- *Hydro-census data both up-stream and down-stream will be undertaken.*
- *In no circumstance mining will be undertaken during monsoon and ponding will be avoided.*
- *Periodic Replenishment data will be generated.*
- *The conditions stated in the sanctioned EC for individual mine will be adhered to.*
- *The budget pertinent to EMP, CER, Plantation, Conservation of species, OHS etc. will be periodically reflected in accounts.*

Observation of EAC: The Committee observed that PP have submitted an EMP prepared for the entire cluster and same is attached as Annexure-VIII to EIA Report submitted for this project. The Committee deliberated the EMP.

d) The activities & budget proposed in the initial EIA Report should not be changed/reduced in any case. In addition to this, PP should provide the

target & budget for the activities to be proposed under EMP, CER, OH&S, Plantation etc. for example if it is proposed for the construction of the toilets then number of toilets to be constructed each year, location, budget considered for construction of each toilet, total numbers of toilets to be constructed each year, annual budget and target for subsequent years needs to be mentioned. Thus, for all the activities proposed PP should submit the time-bound, activity-wise budget so that the same can be monitor at the later stage. PP should ensure to verify all the calculation before submission.

There is no change in activities & budget proposed in the initial EIA Report. The target and budget for the activities proposed under EMP, CER, OH&S, Plantation are as below:

Major Heads	Capital Cost (INR in Lacs)	Recurring Cost (INR in Lacs)
EMP	54	38
CER	42.34	28
OH&S	Nil	10
Plantation	63.45	15.86

Budgetary and time bound action plan of corporate environment responsibility

Activity-1: Infrastructure work for education

(All the Activity Implements in Four Villages viz. i) RajkiyaVidhyalya, Sandhla&Sandhali; ii) Rajkiya Vidhyalya, Lal Chappar, iii) Rajkiya Vidhyalya , Nagla and iv) Rajkiya Vidhyalya , Nagli)

e) New classroom construction in Government School. (Total No. of NewClassroom – 8 ; Construction New Classroom in each school 2*Rs.90,000/-)

Capital Investment Year wise (Rs. In Lacs)as follows & recurring cost /annum is 3.5 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	Total
Activity (1 a)	1.80	Nil	1.80	Nil	1.80	Nil	1.80	Nil	1.80	7.2

f) Toilet Renovation for Students in government Primary and Secondary school (Total No. of Toilet Renovation – 16; Toilet Renovation in each school 4*Rs.18,000/-)

Capital Investment Year wise (Rs. In Lacs)as follows & recurring cost /annum is 2.0 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	Total
Activity (1 b)	Nil	0.7	Nil	0.7	Nil	0.7	Nil	0.7	Nil	2.8

- g) Toilet Repair work for Students in government Primary and Secondary school. (Total No. of Toilet Renovation -72; 2 Toilet Renovation in each school 2*Rs.5,000/-)

Capital Investment Year wise (Rs. In Lacs)as follows & recurring cost /annum is 3.0 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	Total
Activity (1 c)	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	3.6

- h) Renovation Computer Lab in secondary Government School (Total No. of Computer – 24, Computer with Installation and Computer Table in each school 6*Rs.30,000/-)

Capital Investment Year wise (Rs. In Lacs)as follows & recurring cost /annum is 5.0 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	Total
Activity (1 d)	1.80	Nil	1.80	Nil	1.80	Nil	1.80	Nil	1.8	7.2

Activity-2: Infrastructure work for Drinking Water/ Sanitation(Drinking water R.O. installation in Machine in Public Health Centre (PHC) at Village 1. Sandhla&Sandhali, 2. Lal Chappar,3 Nagla,4. Nagli; Total No. of water ATM Machine: 4; One R.O. Water 4*Rs.98000/-)

Capital Investment Year wise (Rs. In Lacs)as follows & recurring cost /annum is 2.5 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	Total
Activity (1 d)	Nil	0.98	Nil	0.98	Nil	0.98	Nil	0.98	Nil	3.92

Activity-3: Medical & Health (Organize Health check-up camps and Medicine distribution programme to provide Malnutrition checkup camps and Access Treatment

Programmes to the nearest habitation of village 1. Sandhla&Sandhali, 2. Lal Chappar, 3. Nagla and 4. Nagli; Health check-up camp in each village 4*Rs.75,000/-)

Capital Investment Year wise (Rs. In Lacs)as follows & recurring cost /annum is 2.0 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	Total
Activity (1 d)	0.75	0.75	0.75	0.75	Nil	Nil	Nil	Nil	Nil	3.0

Activity-4: Rain Water Harvesting(Setup rainwater harvesting structure in Gram Panchayat viz. 1. Sandhla&Sandhali and 2. Lal Chappar; Total No. of - 3 harvesting structure in Gram Panchayat 3*Rs100, 000/-)

Capital Investment Year wise (Rs. In Lacs)as follows & recurring cost /annum is 2.5 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	Total
Activity (1 d)	Nil	1.0	Nil	Nil	1.0	Nil	Nil	Nil	1.25	3.25

The Committee observed that PP has distributed the capital expenditure even after the 5th year also. Thus, Committee is of the view that PP should implement the activities proposed in capital expenditure above within 2-3 years.

Activity-5:Employment Generation Through Vocational Training In consultation with the Gram Panchayats, & Gram Sabha members : (Income & Employment Generation activity for the Youth in the Village Sandhla&Sandhali, Lal Chappar, Nagla, &Nagli through Vocational Workshop for Electrical repair viz : Cooler/ TV/ Fridge/ Fan repair and Plumbing Fitting Orientation classes by qualified trainer. The activity shall generate self-sustainable sources for income & employment. Beneficiaries : 400-500, Total No. of Training - 18 @ 2 training program/annum , number of person to be trained in one workshop shall be 25, all candidates will be provided with Electric/Plumbing Tool Kit 2*25*Rs2, 500/-each.)

Capital Investment Year wise (Rs. In Lacs)as follows & recurring cost /annum is 7.5 Lakh.

Activity	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	Total
Activity (1 d)	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	11.25

Activity-6: Miscellaneous (Publicity Material, Pamphlet) with a capital investment of 0.12 Lakh

Observation of EAC: The Committee observed that PP has proposed Rs 42.34 Lakh (Capital) & Rs 28.0 Lakh/annum (Recurring expenditure amounting to Rs 252 lakh in 9 years). The Committee observed that amount proposed by PP for construction of class in room is just Rs 90,000 which is not a feasible estimate; further renovation and repair of the toilets are similar activities. The recurring expenditure mentioned in various heads is not actually recurring in nature rather they are capital in nature. Thus, Committee re-aligned the activities proposed in capital and recurring expenditure keeping the total amount (capital + recurring for 9 years) same as proposed by the PP. The activities proposed by the Committee are as follows:

CER cost should be ₹ 97.37 Lakh (Capital Cost) & ₹ 21.88 Lakh/annum (Recurring) which includes i) construction of total 8 new classroom (2 classroom/school, covering total 4 schools, cost ₹ @ 5 Lakh/classroom) with capital expenditure ₹ 40 Lakh (Capital) the PP should construct the classroom within 3 years. ii) The PP should construct atleast 10 toilets @ ₹ 1.0 Lakh/toilet, renovate/repair 16 toilets ₹ 20000/toilets with capital expenditure ₹ 13.2 Lakh and keep ₹ 1.0 Lakh/annum (recurring expenditure), toilets to be constructed within 2 years, iii) Renovation of Computer labs of 4 schools by providing computers, expenses of its installation and computer table (providing 20 computers with table at a cost of ₹ 50,000/Computer to 4 schools) with capital expenditure ₹ 10.0 Lakh and recurring ₹ 0.5 Lakh/annum, v) Drinking water R.O. Machine installation in in Public Health Centre (PHC) of villages (Sandhla&Sandhali, Lal Chappar, Nagla and Nagli) (total 4 RO Machine @ ₹ 98000/machine) with capital expenditure ₹ 3.92 Lakh and recurring ₹ 0.5 Lakh/annum, vi) Organizing 18 number of health checkup camps and medicine distribution program at villages (Sandhla&Sandhali, Lal Chappar, Nagla and Nagli) (cost per health camp ₹ 75000) with capital expenditure ₹ 13.5 Lakh and recurring ₹ 0.5 Lakh/annum, vii) Setup rainwater harvesting structure in Gram Panchayat (Sandhla&Sandhali and Lal Chappar) (total 3 rain water harvesting structures @ 1.5 Lakh/structure) with capital expenditure ₹ 4.5 Lakh and recurring ₹ 0.5 Lakh/annum, viii) Vocational Training in consultation with the Gram Panchayat, & Gram Sabha to conduct Vocational Workshop for Electrical Repair (total 18 workshops @ 2 workshops/year, covering 25 persons per workshop, total beneficiaries 400-450, cost per workshop and providing tool kit would be ₹ 1.25 Lakh) with capital expenditure ₹ 11.25 Lakh and recurring ₹ 0.5 Lakh/annum and miscellaneous expenditure for publicity ₹ 1.0 Lakh capital expenditure & ₹ 0.5 Lakh/annum recurring. The remaining recurring expenditure ₹ 16.89 Lakh/annum shall be used for supporting the education of children's of poor family (5 family/village), providing assistance for medical treatment of critically ill persons (2 person/village), and providing assistance for higher education of meritorious youth of the village (5 youth/village). The amount shall be kept in a separate bank account which is to be audited annually. The Proponent should annually (before 1st June of every year for the compliance of proceeding years) submit the detailed report to Regional Office, MoEF&CC on

implementation of the activities proposed in CER along with audited report of expenditure incurred; purchase documents, photographs in support of implementation of activities, etc. At the 9th year if any amount left in this budget head then the same shall be utilized for the infrastructural development of the four villages in consultation with local administration.

- e) **The PP should provide the calculation for the Project Cost as there are some variations in the figures.**

The revised calculation based on actual figures inclusive of Royalty/ contract amount payable to the Government is as below:

Particulars	Amount (In Rs.)
<i>Production Capacity</i>	<i>38,60,000 TPA</i>
<i>Production Cost</i>	<i>195.27/- Per Tonne</i>
<i>Sale Value</i>	<i>250/- Per Tonne</i>
<i>Profit</i>	<i>54.73/- Per Tonne</i>

Observation of EAC:The Committee observed that as per Building Material & Wages of Labour Wages Statistical Compendium 2014 published by Ministry of Housing & Urban Poverty Alleviation, Govt of India the average sale price of sand in Yamunanagar is ranging from Rs 500-550/ m3 during 2011-2013 and now it would be more than that. Thus, the project will be economical and PP should earmark sufficient budget for environmental protection and social welfare activities.

- f) **The PP should after verification submit the baseline data (i.e. raw data of the initial level of the mining lease). In addition to this, as previously suggested that PP should identify the area where mining can be done or where mining cannot be done after considering the provision of Sustainable Sand Mining Management Guidelines 2016, DSR prepared by State Government, condition of letter of intent. After identifying the area of mining the PP should calculate the maximum amount of material that can be extracted keeping the GLC value of all the pollutants within NAAQS limit. After identifying the area of mining and quantity the PP should submit a plan showing the area of mining and no-mining zone and the details number, coordinates, level, depth of mining, section line, volume, tonnage etc.) of the grid falling in mining and no-mining zone. The PP also needs to submit the CSV file as suggested by the Committee during the meeting for verification and official record.**

PP submitted that the Bed Level in Lease area is ranging from 263 MSL (Northern point) to 258 MSL (Southern point). Four Permanent Bench Marks at prominent location close to mining lease are established. Coordinates are as below:-

Bench Mark	Latitude (N)	Longitude (E)	Elevation (MSL) in reference to Nearest 1) Railway Station (Kalanaur/ Kalanour* i.e. 273 MSL at 14 Km in NE & 2) SH-6 at 2.1 Km towards N -267 MSL)
BM -1	29° 58' 13.80"	77°13' 40.80"	259.004
BM-2	29°58' 22.24"	77°13' 31.83"	261.001
BM-3	29°58' 49.06"	77°13' 45.47"	261.22
BM-4	29°59' 09.59"	77°14' 16.20"	261.14

*Spelling as per Google Earth.

As per sustainable Sand Mining Management Guidelines 2016, DSR & LOI, the area for mining and to be left as non-working area are identified. Non-working area are as below:

- 1/3 part of the lease from the bank of river
- 7.5m safety barrier from lease and Lean Channel Flow
- Lean channel Flow

Rest of the area will be available for working.

After identifying the mining area, revised air modeling with respect to GLC's of various pollutants in worst case and control case scenario for the Mining Lease and for Cluster scenario has been done. The worst case scenario based on theoretical computation and full fledged production of all mines at ideal parameters will be $132.4 \mu\text{g}/\text{m}^3$, with effective EMP above 75% the same can be contained.

The Mining will be carried out only in Pre and Post Monsoon Season only. No mining will be carried out during Monsoon. Details is as given below:-

Season	Working Grid	Non-Working Grid
Pre-Monsoon (1 st April to 14 th June)	Western Zone - N-925 to N - 2075/ E-350 to E-925	N-00 to N -1675/ E - 25 to E - 1175
Monsoon (15 th June to 1 st October)	All the grids are non-working	

<i>Post-Monsoon (2nd October to 31st March)</i>	<i>Western Zone – N-925 to N – 2075/ E-350 to E-925 Eastern Zone – N – 50 to N -1675/ E – 175 to E -1225</i>	<i>N 1575/ E-925 N1650/ E-1225</i>
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Lease area is divided into virtual sections of 25m x 25m depicting X-Y-Z is derived. Further, all 93 sections are numbered. Lease is divided into 25m sections along the width of lease and 11 sections along the length. The section lines are numbered from 1 to 93. The each section is related to the geological as well Mineable Resaves incorporating all statutory/ safety boundaries.

Geological Reserves:-

69.70 Million Tonnes (As per Approved Modified Mining Plan)

70.01 Million Tonnes (as per Datamine)

Mineable Reserves:-

4.58 Million Tonnes (As per Approved Modified Mining Plan)

4.75 Million Tonnes (as per Datamine)

Reserve Scenario As Per Toposheet Boundary

Scenario	Parameter	Densi ty	Geological		Mineable	
			Volume	Tonnes	Volume	Tonnes
Scenario 1	3 meter down from the surface	2.6	26,93,085. 939	70,02,023. 441	14,05,859. 784	36,55,235. 44
Scenario 2	3m down from average section RL at each section	2.6	26,72,378. 022	69,48,182. 858	14,63,288. 686	38,04,550. 584
Scenario 3	3m down from max RL of first or last point at each section	2.6	18,19,517. 117	47,30,744. 503	9,65,054.8 784	25,09,142. 684

Reserve Scenario as per Google Earth Boundary

Scenario	Parameter	Densi	Geological	Mineable
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		ty	Volume	Tonnes	Volume	Tonnes
Scenario 1	3 meter down from the surface	2.6	26,93,085.939	70,02,023.441	14,03,867.962	36,50,056.702
Scenario 2	3m down from average section RL at each section	2.6	26,72,378.022	69,48,182.858	14,41,445.478	37,47,758.243
Scenario 3	3m down from max RL of first or last point at each section	2.6	18,19,517.117	47,30,744.503	9,61,202.9743	24,99,127.733

- CSV (MS Excel) file has been submitted in soft copy to MoEF&CC, New Delhi. The excel derived can at any point of time be directly co relate the relevant section at site with proper referencing.

Observation of EAC: The Committee has observed that PP has mentioned that PP submitted that 1/3 part of the lease from the bank of river shall be in safety zone. But as per LoI mining should be carried out in the central 3/4 part of the river. This means 75% of the central part should be allowed for mining and remaining 25% shall be left as safety zone i.e. 12.5 % of either side of the river. Thus, the submission of PP that 1/3 of the area will be left as safety zone (16.5 % on either side) will only provide 66% of the area for the mining. Further, the safety barrier of 7.5 around the mining lease and around the lean channel flow further reduces the effective area of mining. But the plan prepared by the PP seems to be not in line with this statement. The Committee also noted that cumulative GLC of PM₁₀ mentioned by PP is around 133µg/m³ which are more than NAASQ Standard. Considering the cumulative capacity of the mining lease in the cluster the Committee is of the view that in order to keep the environmental parameters within the range, it is necessary to keep the total production quantity controlled. The Committee further observed that the specific gravity used for calculation of tonnage is 2.6 Tonne/m³ but in the replenishment study report submitted by PP and prepared by Hydro Geo Solutions, Jodhpur, at page number 22 the specific gravity of the mineral is mentioned as 2.0 Tonne/m³. Considering this specific gravity and position of river as per current Google Earth image, the mineable reserves comes out to be 19.0-28.0 Lakh Tonne. The Committee also observed that area inside the mining lease will change from time to time due to mining and aggradation/erosion of the mineral, but the area outside the mining lease may remain unaltered unless the river mender and changes its course or any excavation will be carried out outside the mining lease. Further in the LOI it has mentioned that depth of mining shall be not more than 3 meters from un-mined area at any point of time. Thus, the Committee is of the view that in the initial year of mining the scenario 3 will be suitable and thereafter decided based on the

Replenishment Study Report and position of the river with respect to mining lease allotted. Further, Committee observed that PP was unable to demonstrate the quantity at which value of GLCs of various pollutants remains within NAASQ limit. The Committee also noted the Ministry has previously sought comments of State Government for the mining lease in this area. The State Government in its reply submitted that the demand of the mineral is not so high and mines already in operation are operating at lower production rate as compared to sanctioned quantity, by grant of EC by MoEF&CC only the supply get distributed. The Committee after considering the production level of mining lease in the up-stream and downstream and recommendation of State Govt submitted to the Ministry is of the view to that the production from the mine shall be restricted to 19.0 Lakh Tonne/annum (maximum) and same may further reduced if the replenishment of the mineral is less. The PP should submit the annual replenishment study report to the Ministry and the Ministry shall place the same in EAC for finalization of the next year quantity. For conducting replenishment study the PP shall engage Forest Research Institute (FRI), Dehradun/ ICAR-Indian Institute of Soil & Water Conservation, Dehradun.

g) The Ministry has already sought the recommendation of the State Government for this project which is still awaited.

A letter from Deputy Commissioner, Yamunanagar has been issued vide letter no. YNR/Mining/2803 dated 28.12.2018 addressed to Ministry of Environment, Forest and Climate Change, New Delhi. It is also submitted to MoEF&CC by Project Proponent on dated 02.01.2019.

Observation of EAC: The Committee observed that Deputy Commissioner in its letter dated 02.01.2019 inter-alia confirmed that area was visited for its suitability for mining and DSR for Yamuna Nagar District was prepared as per provision of S.O.141(E) dated 15.01.2016 and Sustainable Sand Management Guidelines, 2016.

4. In addition to above, PP also submitted the following:

- a) The proponent mentioned that the LOI over an area of 89.48 ha of Mining lease has been granted by the Director General, Department of Mines & Geology, Haryana vide memo no.- DMG/ HY/ Cont/ NaglaRangran Block/ YNR B 14/ 2017/ 2654 dated 16.06.2017 for a period of 9 years. The lease area lies on riverbed of Yamuna River in District- Yamuna Nagar (Haryana).
- b) The PP submitted that the Mining plan Progressive Mine Closure Plan was approved by Director General of Mines and Geology Department on dated 24.01.2018 for production capacity 39, 00,000 TPA. PP submitted that for compliance of ToR granted by MoEF&CC modified mining plan was submitted to Director General of Mines and Geology Department on dated 03.03.2018 for production capacity 38,60,000 TPA and the same was approved vide Memo No. DMG/HY/MP/NaglaRangran Block/PKL B-14/2017/3985-88 Dated 07.08.2018.

c) PP submitted that mining is proposed up to 3.0-meter depth in river bed. PP submitted that sand shall be excavated by deploying Nos. 10 light weight excavator of capacity 0.9 m³ and PP submitted that 130 Nos. Trucks/Tipplers of 25 tones capacity shall be hired for transporting to local market. PP submitted that 1 Nos. light vehicle/jeep and 1 Nos maintenance van will also be deployed. PP previously proposed 2 water tanker (tractor driven) for dust suppression and now increased the number of water tanker to be deployed for dust suppression to 4 (2 own and 2 on rental basis) tractor driven water tanker of 4000 liters.

PP previously submitted that as per UNFC Code (111) total reserve is 53, 68,800 MT and mineable reserve is 45, 64,800 MT. The PP now submitted that the total geological reserves have been calculated by using datamine software and Total geological reserves are 69, 79,440 Tonne and mineable reserves are 45, 86,621 Tonne

Observation of EAC: i) It has observed that the revised geological and mineable reserves are calculated by considering the specific gravity of the material as 2.6 Tonne/m³ & river profile based on available topo-sheet. But in the replenishment study report submitted by PP and prepared by Hydro Geo Solutions, Jodhpur, at page number 22 the specific gravity of the mineral is mentioned as 2.0 Tonne/m³. Thus, the maximum geological and mineable reserves considering the position of the river as seen from Google earth & specific gravity as 2.0 Tonne/m³ come out to be 5386171 and 2807736 respectively.

Scenarios	Reference for depth of mining	Mineable Reserves		
		Density	Volume	Tonnage
Scenrio-1	3 meter down form surface	2.0	1403868	2807736
Scenrio-2	3 meter down from average section RL at each section	2.0	1441445	2882890
Scenrio-3	3m down from max RL of first or last point at each section line.	2.0	961203	1922406

ii) The PP has proposed to reduce the water consumption by using water tanker with atomizer. Thus, PP shall engage at least 2 Nos of water tanker with mist generator canon attachment.

d) PP submitted that the maximum working depth of mining will be 3 m bgl in river bed where the groundwater table exists at an average depth of 8-10 m bgl, so mining depth will not intersect the ground water table. PP submitted that the water will be taken from existing water sources from nearby villages or tanker supplier. PP submitted that an application regarding ground water extraction (120 KLD) was submitted to CGWA on dated 24.04.2018. The PP previously submitted that the total water requirement was 125 KLD and same has been now reduced to 85.0 KLD, out of

which 5.0 KLD water will be used for domestic purpose, 75.00 KLD for dust suppression and 15.00 KLD for plantation. The water demand will be met through groundwater abstraction from nearby wells.

Observation of EAC: i) The committee observed that Permission from CGWA is still awaited and thus provision of Ministry's O.M No 21-103/2015-IA.III dated 2.11.2018 regarding terms of reference related to ground water withdrawal wherein it has mentioned that following ToR shall be invariably incorporated to address the issues while prescribing ToRs for various developmental projects:

a) In the projects where ground water is proposed as water source, the project proponent shall apply to the Central Ground Water Authority (CGWA)/State Ground Water Authority(SGWA), as the case may be, for obtaining No Objection Certificate (NOC), if applicable, the MoEF&CC/SEAC may ensure that such application has been made.

b) Approval/permission of CGWA/SGWA shall be obtained before drawing ground water for the project activities. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.

ii)The PP has proposed that use of atomizer water tanker will reduce the water consumption by 50% but the same is not mentioned in the list of mining machinery. Thus, PP should engage at least 2 nos of water tanker (own) with mist generator canon attachment and 2 Nos on rental basis. In addition to this, PP has not provided the cost of such water tanker to be procured. Thus, Committee suggested that Rs 50. Lakh shall be included in dust suppression head of EMP.

e) The PP previously submitted that total 45000 saplings (11772 saplings during 1st year and then 8307 sapling per year from 2nd to 5th year) of Neem, Peepal, Ber, Shisham, Sirish, and other native species as per DFO Yamunanagar shall be planted at Along the motorable road Plantation in nearby Village Nagli, Nagla, Sandhali, Sandhala plantation in schools, panchayat land and in surrounding office & rest shelter and other social forestry program covering total 30 Ha area and budget proposed was 45.0 Lakh.

The PP now submitted revised plantation plan wherein 57690 saplings will be planted on 38.46 Ha area covering 13 villages [Sandhla (6210 saplings), Sandhali (4140 saplings), Lal chapper (3780 saplings), Nagla (4800 saplings), Nagli (1860 saplings), Gumthala (3360 saplings), Majri (3240 saplings), MugalMazra (3840 saplings), Kandrauli (9420 saplings), Lakhirpur (2085 saplings), Fatehgarh (5850 saplings), Mandhar (3360 saplings), and Rajheri (5745 saplings)]. Inside the villages plantation will be carried out on Village Road, Panchayat Bhawan, Community Center, School and Public Health Centre. The total area covered under plantation will be 39 Ha and budget for plantation will be Rs 6345900 (Capital) and Rs 1586475 (recurring).

Observation of EAC: The Committee has observed that PP has selected large area for plantation but in order to monitor the same the PP should submit the detailed plantation plan which clearly mention the name, address, geo-location and photograph of school, Panchayat Bhawan, Community Center and Public Health Centre where plantation shall be carried out. In addition to this PP should submit the length & geo-locations of roads along which plantation will be carried out. The PP should clearly bring out the number of saplings, area to be covered under plantation in each of these locations. This Plan should be submitted within one month of grant of EC. The Committee also suggested that PP should carry out plantation of vetiver grass in 5 meters out of 7.5 meter of the safety zone around the lease boundary to protect the banks of the river.

- f) The PP reported that there is no forest land involved in the proposed mine lease area same has been confirmed by Forest Department vide letter No 1741 on dated 09.08.2017. No National Parks, Sanctuaries, Biosphere Reserves Wildlife Corridors, Tiger/Elephant Reserves/Critically Polluted areas/Aravali are falling within 10 Km of the study area. Same has been confirmed by Forest Department vide letter No 1741 on dated 09.08.2017.
- g) The PP previously proposed that there is only one schedule-1 species i.e. Peafowl (PavoCristatus) and prepared a conservation plan with a budget provision of Rs 10 Lakh which includes i) Rs 5.0 Lakh for Planting of trees groves in surrounding area and Promotion of agro forest in villages planting fruits trees, ii) Rs 2.0 Lakh for artificial nests, feeding and watering arrangement for animals , iii) Rs 1.0 Lakh for Workshops, Training and awareness programs, iv) Rs 1.0 Lakh for Water supply and v) Rs 1.0 Lakh for Contingency. But the approved Conservation Plan obtained from the Office of Forest Department, Govt. of Haryana O/o P.C.C.F. Cum Chief Wildlife Warden, Haryana vide letter no. 1908 dated 30.08.2018, there are five Schedules-I species were reported in Yamunanagar district i.e. Indian Panther, Indian Monitor Lizard, Pangolin, Indian Peafowl and Wild Pig. This conservation plan is approved with total cost of 25.0 Lakh for 9 years. The PP submitted the revised Conservation Plan for remaining Schedule-I species i.e. Indian Panther, Indian Monitor Lizard, Pangolin and Wild Pig has been sent via email to The Divisional Forest Officer, Panchkula, Haryana on dated 30.10.2018. The amount proposed for the conservation plan is Rs 57.40 Lakh.

Observation of EAC:The Committee is of the view that PP already has an approved Wildlife Conservation plan and also submitted for other species reported by Chief Wildlife Warden. Thus, PP needs to submit the approval of this conservation plan within 6 months of grant of EC.

- h) PP submitted the District Survey Report for Sustainable Sand Mining for Districts Yamuna Nagar.

- i) 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-December 2017 have been reported and no major divergence was observed with respect to concentration values of various parameters of collected samples. However, the concentration of PM₁₀ and PM_{2.5} is slightly more than NAAQS as predicted by air quality models used by the project proponent.

The comparison of prediction of two models used (CALINE4) and (AERMOD V 7.1.0) in worst case and control case scenario are as follows:

Previous: (CALINE4)

Location Code	Location Name	Max Baseline Conc. (µg/m ³)	Cumulative GLC (µg/m ³) (PM10) Worst Case	Cumulative GLC (µg/m ³) (PM10) Control Case
A1	Project Site	89.8	336.439	151.883
A2	Near Nagla School	97.3	150.248	110.634
A3	Baheri	97.8	122.649	104.031
A4	Kasimpur	97.6	107.972	100.258
A5	Lakhibas	95.3	105.530	97.874
A6	Barson	97.1	98.285	98.285

Revised: (AERMOD V 7.1.0)

Location Code	Location Name	Max Baseline Conc. (µg/m ³)	Cumulative GLC (µg/m ³) (PM10) Worst Case	Cumulative GLC (µg/m ³) (PM10) Control Case
A1	Project Site	89.8	133.1	100.8
A2	Near Nagla School	97.3	106.9	99.8
A3	Baheri	97.8	98.3	98.1

A4	Kasimpur	97.6	97.7	97.6
A5	Lakhibas	95	95.4	95.2
A6	Barson	95.3	95.5	95.3

Previous: (CALINE4)

Location Code	Location Name	Max Baseline Conc. ($\mu\text{g}/\text{m}^3$)	Cumulative GLC ($\mu\text{g}/\text{m}^3$) (PM2.5) Worst Case	Cumulative GLC ($\mu\text{g}/\text{m}^3$) (PM2.5) Control Case
A1	Project Site	50.6	66.5	54.3
A2	Near Nagla School	57.4	60.9	58.7
A3	Baheri	57.2	57.4	58.6
A4	Kasimpur	57.2	57.2	57.2
A5	Lakhibas	58.6	58.8	58.6
A6	Barson	58.6	58.7	56.2

Revised: (AERMOD V 7.1.0)

Location Code	Location Name	Max Baseline Conc. ($\mu\text{g}/\text{m}^3$)	Cumulative GLC ($\mu\text{g}/\text{m}^3$) (PM2.5) Worst Case	Cumulative GLC ($\mu\text{g}/\text{m}^3$) (PM2.5) Control Case
A1	Project Site	50.6	66.5	54.6
A2	Near Nagla School	57.4	60.9	58.3
A3	Baheri	57.2	57.4	57.3
A4	Kasimpur	57.2	57.2	57.2
A5	Lakhibas	58.6	58.8	58.6
A6	Barson	58.6	58.7	58.6

Observation of EAC: a) The Committee observed that there are variations in the two models used. Further, in the Worst Case & Control Case Scenario there is increase in GLC values of PM₁₀& PM_{2.5} as compared to NAAQS. The Committee is of the view that although the results of air quality models are tentative in nature and used to decide on the environmental protection measures and quantity to be permitted for mining but in the instant case as the PP was not able to demonstrate the quantity at which GLC values are within the NAASQ limits. b) The Committee also observed that the State Government in the similar cases has informed the Ministry that demand of the mineral is less in the area and other mines in the area are operating at the lower capacity as against the permitted capacity. The grant of EC by MoEF&CC will only distribute the supply of the Mineral in the area. The Committee after considering the recommendation of the State Government, considering the air quality predications, considering the various scenarios generated by datamine software, environmental protection measures proposed by the PP and as suggested by the Committee, restricted the mining operation to the lower annual quantity of 19.0 Lakh TPA from 38.6 Lakh TPA. The Committee is of the view that reducing the quantity will directly reduce the transportation load on the existing road network & proposed road network and also help in maintaining the air quality of the area. The Committee is also of the view that quantity permitted will be reviewed annually at least for the next three years based on the replenishment quantity and baseline air quality of the area in future.

- j) PP reported that there is no court case/ litigation pending against the project.
- k) The public hearing (PH) for the proposed project of "NaglaRangran Block YNR/B-14" of M/s Tirupati Earth and Project works Pvt. Ltd. was held under Chairmanship of Shri Vijay Kumar Siddappa, I.A.S., Deputy Commissioner, Yamuna Nagar at the mine site, on dated 03.04.2018 at 11:00 AM as per the EIA Notification dated 14th September 2006, as amended by the Ministry of environment and Forest, New Delhi. The press notification indicating the date, time and venue of the public hearing was published in Daily newspaper i.e. '*The Tribune*' & '*Haribhoomi*' dated on 02.03.2018 by Regional Officer, Panchkula with project details inviting suggestions, views, comments and objections from the public regarding proposed 38,60,000 TPA production capacity of Sand (Minor mineral).

The issues raised during public hearing were also deliberated during the meeting which includes CSR Activities, plantation, charity to temple, provision of road for transportation of mineral, dust suppression, provision for dust suppression, employment, social welfare, compensation to land owners etc. The commitments made during PH by PP are i) Rs 28 Lakh/annum is proposed under CSR, ii) Rs 54 Lakh (Capital Cost) & Rs 38.0 Lakh (recurring) for implementation of Environmental Management Plan (EMP), iii) before start of mining operation lease holder will settle the compensation amount mutually with the land owner, and iv) Budget of Rs 10 Lakh for Occupational Health & Safety.

Observation of EAC:The ToR was issued on 24.09.2017. The baseline data was collected during October, 2017 – December, 2017. The PP obtained the approval of mining plan on 24.01.2018. The public hearing notice was given on 02.03.2018. The PH was conducted on 03.04.2018 (11:00 A.M.). The PH was chaired by Shri Vijay Kumar Siddappa, I.A.S., Deputy Commissioner, Yamuna Nagar. The modified mining plan as suggested by EAC was submitted to Director General of Mines and Geology Department on dated 03.03.2018 for production capacity 38,60,000 TPA and the same was approved vide Memo No. DMG/HY/MP/NaglaRangran Block/PKL B-14/2017/3985-88 Dated 07.08.2018. The Committee also revised the budget allocation of the activities proposed in CER from 42.34 Lakh (Capital) & ₹ 28.0 Lakh/annum (recurring) to ₹ 97.37 Lakh (Capital Cost) & ₹ 21.88 Lakh/annum (Recurring)

- l) The PP submitted that the as no (R & R) is involved in this project this does not apply to this case.
- m) The Project Proponent previously submitted that the budget earmarked for Environmental Management Plan (EMP) shall be ₹ 54 Lakh (Capital) & ₹ 38 Lakh (recurring) which includes i) Pollution monitoring – Air, Water, Noise and Soil- ₹ 8 Lakh (recurring), ii) Dust Suppression - ₹ 6 Lakh (Capital) & ₹ 12 Lakh (recurring), iii) Plantation will be at Village- Nagla, Majri and Sandhla - ₹ 5 Lakh (Capital) & ₹ 8 Lakh (recurring), iv) Rainwater recharging (outside the project site) ₹ 3 Lakh (Capital) & ₹ 2.0 Lakh (recurring), v) Haul road and other roads repair and maintenance ₹ 40 Lakh (Capital) & ₹ 8.0 Lakh (recurring), and vi) Pre monsoon and Post Monsoon survey for sedimentation in ₹ 0.0 Lakh (recurring).

The PP also submitted that in order to implement the EMP 5 persons will be engaged viz. Manager (EHS) [₹ 25000 /Month], Asst. Manager (Environment) [₹ 20000 /Month], Environmental Executive [₹ 20000 /Month], Horticulturist [₹ 10000 /Month], and Supervisor [₹ 8000 /Month]. The total budget for the staff will be 9.96 Lakh/annum.

Observation of EAC: The Committee observed that PP has proposed to increase the number of plants to be planted from 45000 to 57690 and amount previously proposed for plantation was ₹ 45.0 Lakh @ ₹ 100/sapling. The same has been now revised to ₹ 6345900 (Capital) and ₹ 1586475 (25% recurring) @ ₹ 110/sapling. But the plantation cost in EMP is mentioned as ₹ 5 Lakh (Capital) & ₹ 8 Lakh (recurring). Further, the PP did not proposed any amount for the annual replenishment study, the PP has also proposed for reduction of water uses by water spraying by atomizer but the water tanker proposed by PP are conventional tractor mounted. Thus, Committee is of the view that EMP cost needs to be revised after incorporating the above and same should be read as following:

Budget earmarked for Environmental Management Plan (EMP) shall be ₹ 186.419 Lakh (Capital) & ₹ 76.81 Lakh (recurring) which includes i) Pollution monitoring – Air, Water, Noise and Soil- ₹ 8 Lakh (recurring), ii) Dust Suppression - ₹ 50 Lakh (Capital) & ₹ 12 Lakh (recurring), iii) Plantation covering 38.49 Ha covering 13 villages ₹ 63.5 Lakh (Capital) & ₹ 15.9 Lakh (recurring), iv) Rainwater recharging (outside the project site) ₹ 3 Lakh (Capital) & ₹ 2.0 Lakh (recurring), v) Haul road and other roads repair and maintenance ₹ 40 Lakh (Capital) & ₹ 8.0 Lakh (recurring), and vi) Pre monsoon and Post Monsoon survey for sedimentation in ₹ 20 Lakh (Capital) & ₹ 20 Lakh (recurring).

- n) PP has submitted that the budget for Occupational Health and Safety shall be ₹ 10.0 Lakhs/annum out of which ₹ 1 Lakh shall be used for Measures to Prevent Accidents during mineral Loading, ₹ 1 Lakh for measures to Prevent Accidents during minerals Transportation, ₹1 Lakh for measures to Prevent Accidents due to Trucks/ Dumpers etc., ₹ 2 Lakh for measures to Prevent Dangerous Incidents during Inundation/Flooding, ₹ 2 Lakh for education awareness and first aid kit, ₹ 3 Lakh for medical Examination Schedule.
- o) The Project Proponent previously submitted that the total project cost shall be ₹ 9.5 Crore and shall give direct employment to 163 persons. The PP revised the same to ₹ 10.68 Crore based on the suggestion given by EAC during the meeting.
- p) Consultant submitted that the consultant shall be fully accountable for any misleading information mentioned in this statement. The Committee observed that PP has already submitted an undertaking in this regard. During the meeting the Consultant also submitted an undertaking.

Observation of Committee: The PP & Consultant should submit an undertaking that the information provided in the EIA/EMP Report and all other submission made to the Ministry in respect of this project are factually correct and PP & Consultant are fully accountable for the same. The PP & Consultant submitted the desired undertaking during the meeting.

- q) The requirement of submission is after the issuance of O.M. No. 22-8/2018 IA.III (M) dated 20.04.2018. The PP applied in Form-II.
- r) The PP has submitted a replenishment study report conducted by Hydro Geo Solutions, Jodhpur. The Member Secretary informed the Committee that previous EAC in its meeting held on 24.10.2016 mentioned that "*The sand mining proposals from other States namely Uttarakhand, Himachal Pradesh, Uttar Pradesh, Jammu and Kashmir, Haryana, and Bihar wherein there are **perennial rivers** and are, therefore, replenished during monsoons. Such annual replenishments raise the river bed at certain places along the river and need to be mined to avoid threat of floods during subsequent monsoon season. The Committee is of the view that in such States like*

Uttarakhand, Uttar Pradesh, Himachal Pradesh, Jammu & Kashmir, Haryana and Bihar the replenishment study is not required at the time of EC application and PP shall submit the replenishment study after 02 years of grant of EC."

Observation of EAC: In the instant case prior replenishment study is not required as the river is perennial in nature. However, PP has submitted a replenishment study report conducted by Hydro Geo Solutions, Jodhpur which is based on theoretical calculations. But as per Sustainable Sand Management Guidelines 2016 the PP needs to conduct replenishment study annually from authorized agency. The Committee suggested that for the replenishment study PP shall engage Forest Research Institute (FRI), Dehradun/ ICAR-Indian Institute of Soil & Water Conservation, Dehradun.

The Committee also noted that use of conventional methods for survey should be supported by advance technologies (such as drone/ satellite etc.) in the field for further facilitation of data collection in the mining industry for reserve estimation & rec-conciliation of the excavation. Thus, PP shall also engage a suitable survey agency which will ascertain the level of mining lease pre-monsoon and post monsoon. The Committee is of the view that results of the conventional survey and advance technology survey method will be then compared to ascertain the feasibility of the same for carrying out replenishment study.

The proposal is a **green field project** and does not requires verification in pursuant to Hon'ble Supreme Court order dated 02.08.2017 in the matter of Common Cause and S.O 804(E) dated 14.03.2017. The PP needs to submit 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.

Based on the discussion held and documents submitted by the PP, the Committee **recommended** the proposal for grant of EC for mining of **19,00,000 TPA** of Sand from "Nagla Rangran Block/ YNR B 14 having mine lease area 89.48 ha, located at Village – NaglaRangran, Taluka – Radaur, District – Yamuna Nagar, Haryana by M/s Tirupati Earth & Project Works Pvt. Ltd.

The Committee also recommended the following additional **specific condition** for the project in addition to Standard EC Conditions (Annexure-III) & Special Conditions as per Sustainable Sand Management Guidelines, 2016.

Specific Conditions:

- 1) The project proponent shall 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. as mentioned in affidavit submitted by the PP in this behalf to the Ministry.
- 2) In case of violation of above undertaking, the Environmental Clearance shall be liable to be terminated forthwith.

- 3) The Environmental Clearance will not be operational till such time the Project Proponent complies 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.
- 4) State Government concerned shall ensure that mining operation shall not commence 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 the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- 5) The State Government of Haryana should issue a no objection certificate after the payment of the compensation by the PP for any violation of Common Cause order dated 02.08.2017 if any to the Project Proponent and copy of the same needs to be submitted to the Ministry of Environment Forest & Climate Change.
- 6) Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Haryana, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.
- 7) No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.
- 8) The Project Proponent shall obtain Consent to Operate from the State Pollution Control Board, Haryana and effectively implement all the conditions stipulated therein.
- 9) The budget for proposed for **Occupational Health and Safety** shall not be less than ₹ 10.0 Lakhs/annum and should be kept in separate bank account which needs to be audited annually. out of which ₹ 1 Lakh shall be used for Measures to Prevent Accidents during mineral Loading, ₹ 1 Lakh for measures to Prevent Accidents during minerals Transportation, ₹1 Lakh for measures to Prevent Accidents due to Trucks/ Dumpers etc., ₹ 2 Lakh for measures to Prevent Dangerous Incidents during Inundation/Flooding, ₹ 2 Lakh for education awareness and first aid kit, ₹ 3 Lakh for medical Examination Schedule. The Proponent should annually submit the detailed report to Regional Office, MoEF&CC on implementation of Occupational Health and Safety Plan along with audited report of expenditure incurred; purchase documents, photographs in support of implementation of activities, etc.
- 10) The budget approved by EAC for **Environmental Management Plan (EMP)** shall be ₹ 186.41 Lakh (Capital) & ₹ 76.81 Lakh (recurring per annum) which includes i) Pollution monitoring – Air, Water, Noise and Soil- ₹ 8 Lakh (recurring), ii) Dust Suppression -₹ 50 Lakh (Capital) & ₹ 12 Lakh (recurring), iii) Plantation ₹ 63.5 Lakh (Capital) & ₹ 15.9 Lakh (recurring), iv) Rainwater recharging (outside the project site) ₹ 3 Lakh (Capital) & ₹ 2.0 Lakh (recurring), v) Haul road and other roads repair and

maintenance ₹ 40 Lakh (Capital) & ₹ 8.0 Lakh (recurring), and vi) Pre monsoon and Post Monsoon survey for sedimentation in ₹ 20.0 Lakh (Capital) & ₹ 20.0 Lakh (recurring), Manpower for implementation of EMP ₹ 9.96 Lakh (Capital) & ₹ 10.95 Lakh (recurring with 10% annual increment over 9.96 Lakh). The Plantation proposed by PP is 57690 saplings will be planted on 39.0 Ha area covering 13 villages [Sandhla (6210 saplings), Sandhali (4140 saplings), Lal chapper (3780 saplings), Nagla (4800 saplings), Nagli (1860 saplings), Gumthala (3360 saplings), Majri (3240 saplings), MugalMazra (3840 saplings), Kandraul (9420 saplings), Lakhirpur (2085 saplings), Fatehgarh (5850 saplings), Mandhar (3360 saplings), and Rajheri (5745 saplings)]. Inside the villages plantation will be carried out on Village Road, Panchayat Bhawan, Community Center, School and Public Health Centre. The PP also proposed to engage 5 persons viz. Manager (EHS) [₹ 25000 /Month], Asst. Manager (Environment) [₹ 20000 /Month], Environmental Executive [₹ 20000 /Month], Horticulturist [₹ 10000 /Month], and Supervisor [₹ 8000 /Month]. The total budget for the staff will be 9.96 Lakh/annum for implementation of EMP. The amount proposed in the EMP shall be kept in separate bank account and same needs to be audited annually. The Proponent should annually (before 1st June of every year for proceeding year) submit the detailed report to Regional Office, MoEF&CC on implementation of EMP along with audited report of expenditure incurred; purchase documents, photographs in support of implementation of activities, Geo-location of the monitoring stations, plantation sites, details of persons engaged for the implementation of EMP etc.

- 11) PP should submit the detailed plantation plan which clearly mention the name, address, geo-location and photograph of school, Panchayat Bhawan, Community Center and Public Health Centre where plantation shall be carried out. In addition to this PP should submit the length & geo-locations of roads along which plantation will be carried out. The PP should clearly bring out the number of saplings, area to be covered under plantation in each of these locations. This Plan should be submitted within one month of grant of EC. The Committee also suggested that PP should carry out plantation of vetiver grass in 7.5-meter safety zone around the lease boundary to protect the river banks from erosion.
- 12) The amount earmarked for Corporate Environment Responsibility (CER) shall be ₹ 97.37 Lakh (Capital Cost) & ₹ 21.89 Lakh/annum (Recurring) which includes i) construction of total 8 new classroom (2 classroom/school, covering total 4 schools, cost ₹ @ 5 Lakh/classroom) with capital expenditure ₹ 40 Lakh the PP should construct the classroom within 3 years. ii) The PP should construct atleast 10 toilets @ ₹ 1.0 Lakh/toilet, renovate/repair 16 toilets ₹ 20000/toilets with capital expenditure ₹ 13.2 Lakh and keep ₹ 1.0 Lakh/annum (recurring expenditure) toilets to be constructed within 2 years, iii) Renovation of Computer labs of 4 schools by providing computers, expenses of its installation and computer table (providing 20 computers with table at a cost of ₹ 50,000/Computer to 4 schools) with capital expenditure ₹ 10.0 Lakh and recurring ₹ 0.5 Lakh/annum, v) Drinking water R.O. Machine installation in in Public Health Centre (PHC) of villages (Sandhla&Sandhali, Lal

Chappar, Nagla and Nagli) (total 4 RO Machine @ ₹ 98000/machine) with capital expenditure ₹ 3.92 Lakh and recurring ₹ 0.5 Lakh/annum, vi) Organizing 18 number of health checkup camps and medicine distribution program at villages (Sandhla&Sandhali, Lal Chappar, Nagla and Nagli) (cost per health camp ₹ 75000) with capital expenditure ₹ 13.5 Lakh and recurring ₹ 0.5 Lakh/annum, vii) Setup rainwater harvesting structure in Gram Panchayat (Sandhla&Sandhali and Lal Chappar) (total 3 rain water harvesting structures @ 1.5 Lakh/structure) with capital expenditure ₹ 4.5 Lakh and recurring ₹ 0.5 Lakh/annum, viii) Vocational Training in consultation with the Gram Panchayat, & Gram Sabha to conduct Vocational Workshop for Electrical Repair (total 18 workshops @ 2 workshops/year, covering 25 persons per workshop, total beneficiaries 400-450, cost per workshop and providing tool kit would be ₹ 1.25 Lakh) with capital expenditure ₹ 11.25 Lakh and recurring ₹ 0.5 Lakh/annum and miscellaneous expenditure for publicity ₹ 1.0 Lakh capital expenditure & ₹ 0.5 Lakh/annum recurring. The recurring expenditure ₹ 16.89 Lakh/annum shall be used for supporting the education of children's of poor family (at least 5 family/village), providing assistance for medical treatment of critically ill persons (atleast 2 person/village), and providing assistance for higher education of meritorious youth of the village (atleast 2 youth/village), charity for temple located in valmikibasti (Rs 1 Lakh/annum). The amount shall be kept in a separate bank account which is to be audited annually. The Proponent should annually (before 1st June of every year for the compliance of proceeding years) submit the detailed report to Regional Office, MoEF&CC on implementation of the activities proposed in CER along with audited report of expenditure incurred; purchase documents, photographs in support of implementation of activities, etc. At the 9th year if any amount left in this budget head then the same shall be utilized for the infrastructural development of the four villages in consultation with local administration.

- 13) The Budget of ₹ 25 Lakh already approved for Wildlife Conservation Plan shall be deposited in the Government Account. The approval of conservation plan submitted to Chief Wildlife Warden on 30.10.2018 for the remaining schedule-1 species and with the budgetary provision of ₹ 57.40 Lakh shall be submitted to the Ministry within 6 months. The amount that will be approved by Chief Wildlife Warden shall be deposited in the Government account.
- 14) The PP has already applied to CGWA for NOC for extraction of Ground Water. Thus, Approval/permission of CGWA/SGWA shall be obtained before drawing ground water for the project activities. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission in pursuant to Ministry's O.M. No. 21-103/2015-IA.III dated 2.11.2018. This Environmental Clearance is subject to obtaining permission from CGWA for withdrawal of ground water.
- 15) The Project Proponent shall also take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted in the study area;

- 16) High Powered Committee (HPW) was constituted under the orders of Hon'ble NGT, headed by Secretary, MOEF&CC, which has given its report dated September, 2016. The PP shall comply with recommendation of (HPW) as applicable for project proponent.
- 17) The Hon'ble NGT recently in its order dated 4.09.2018 inter-alia directed that *"One of the conditions of every lease of mine or minerals would be that there will be independent environmental audit atleast once in a year by reputed third party entity and report of such audit be placed in public domain. In the course of such environmental audit, a three member committee of the local inhabitants will also be associated. Composition of three members committee may preferably include ex-servicemen, former teacher and former civil servant. The Committee will be nominated by the District Magistrate."* Thus, PP and State Government should comply with the order of Hon'ble NGT and submit an annual environmental audit report to the Ministry and keep the same in public domain as proposed above.
- 18) The PP shall engage Forest Research Institute (FRI), Dehradun/ ICAR-Indian Institute of Soil & Water Conservation, Dehradun for conducting annual replenishment study. The survey should be done in the same grid pattern (25m x 25m) and in same interval based on which initial level of mining lease was recorded. The report so prepared shall be submitted to Ministry of Environment Forest & Climate Change and shall be placed before Expert Appraisal Committee before carrying out mining for the remaining period. The placing of the study report before EAC is mandatory for initial three years.
- 19) The proponent shall construct 3 dedicated roads for the transportation of mineral from mining lease to nearest tar road. The number of trucks/tippers shall not exceed the estimated quantity of 95 trucks/tippers per day from each road. The transport of mineral will not be done through villages / habitations for which dedicated roads needs to be provided so that the impact of sound, dust and accidents could be mitigated. The PP shall engage the sufficient staff for traffic management and keep proper record of trucks passing through each road.
- 20) Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and density. The PP shall ensure regular cleaning & grading of the roads used for transportation for smooth traffic movement.
- 21) Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the Impact of sound, dust and accidents could be mitigated. The Project Proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on

existing village road network without appropriately increasing the carrying capacity of such roads;

- 22) The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded, Proponent should obtain 'PUC' certificate for all the vehicles owned by the company from authorized pollution testing center: Washing of all transport vehicle should be done inside the mining lease. The proponent shall maintain a record of water consumption and water- spraying on the haul roads.
- 23) The illumination and sound at night at project site disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations, Habitations have a right for darkness and minimal noise levels at night. Project Proponent must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours. The mining operation shall only be carried out in day hours only.
- 24) Demarcation of mining area with pillars and geo-referencing should be done prior to start of mining. The area should be properly surveyed and mapped with the help of DGPS to assign geo-coordinates and accordingly erect boundary pillars so as to avoid illegal and unscientific mining. Permanent pillars has to be constructed to demarcate width of extraction of ROM leaving 25% of River width from the bank with depth of 1.5m below the ground and 1.2m above the ground to observe its stability;
- 25) The profile of river has been considered as per latest satellite image and in case river changes its course during the contract period (9 years) and goes outside the mining lease then mining should be stopped immediately and can be resumed only after obtaining permission from MoEF&CC. The depth of mining is restricted to 3 meters from the maximum RL at each section line for first years and thereafter based on the replenishment study report and as approved by EAC but in no case it should be more than 3 meters from the un-mined area.
- 26) Activity proposed in cluster EMP needs to be complied with & submit the approval of wildlife conservation submitted to Chief Wildlife Warden on 30.10.2018.
- 27) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

28) The mining operation shall only be carried out in the supervision of mining engineer and suitable staff for implementation of EMP shall be engaged before carrying out mining operations.

(2.27). Adityana Limestone, Marl & Clay Mine (Mining Lease Area 643.02 ha) of M/s Saurashtra Cement Ltd. with Production capacity of Limestone 5.1 million TPA, Marl 1.69 million TPA with existing crusher of 1000 TPH at villages-Adityana&Ranavav, District-Porbandar, State-Gujarat (File No: J-11015/08/2019-IA.II(M); Old File No. J-11015/22/2001-IA.II; Proposal No: IA/GJ/MIN/81075/2018). Considerations of Proposal under the provision of Ministry's Notification vide S.O. (E) 1530, dated 06.04.2018-Consideration of TOR.

The PP vide letter no. SCL/Mines/MoEF&CC/01/2019 dated 21.01.2019 requested to postpone the project as **PP could not attend** the meeting.

(2.28). Guma II Limestone block (ML Area 249.030 ha) with Limestone Production Capacity 3.5 Million TPA (ROM), Top Soil 0.038 Million TPA, Over burden 0.690 million TPA, Sub grade 0.320 million TPA and Mineral reject 0.560 million TPA with installation of crusher with wobbler 1500 TPH and Installation of new conveyor (length 4.05 km) from crusher to the plant at Villages: Guma, Sarseni, Khapradih, Tehsil: Palari&Simga, District- BalodaBazar-Bhatapara, State-Chhattisgarh by M/s Ultra Tech Cement Ltd (File No: J-11015/09/2019-IA.II(M); Proposal No: IA/CG/MIN/87280/2018)- Consideration of TOR

The proposal of M/s Ultra Tech Cement Ltd. for mining of Limestone block with Limestone Production Capacity 3.5 Million TPA (ROM), Top Soil 0.038 Million TPA, Over burden 0.690 million TPA, Sub grade 0.320 million TPA and Mineral reject 0.560 million TPA (Total excavation 5.108 million TPA) with installation of crusher with wobbler 1500 TPH and Installation of new conveyor (length 4.05 km) from crusher to the plant in the mining lease area of 249.03 ha. The proponent submitted that as per the EIA notification, 2006, it is a Category "A" Project and the activity of (1a) mining of minerals and (2b) beneficiation of minerals. The mining lease area 249.03 ha is covered in the toposheet number of the Core Zone: 64K/2(F44Q2) and the Buffer Zone: 64G/14 (F44P14), 64K/2 (F44Q2), 64K/3 (F44Q3) at Villages: Guma, Sarseni, Khapradih, Tehsil: Palari&Simga, District- BalodaBazar-Bhatapara, State-Chhattisgarh. The Guma II Limestone block is lying between Latitude - 21° 34' 50.98807" N to 21° 36' 7.75979" N & Longitude - 82° 2' 35.10228" E to 82° 3' 37.91742" E. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The proponent submitted the letter of Intent for mining lease area of 249.030 ha was granted by Mineral Resources Department of Chhattisgarh vide letter No F-3-09/2017/12 dated 01.05.2018 and amended on 22.06.2018. The PP mentioned that it is an interlinked project with other two projects. The first interlinked projects is the proposed Expansion in existing Integrated Cement Plant with Clinker (6.5 to 10.0 million TPA), Cement (3.3 to 7.0

million TPA), WHRS (16 to 36 MW) & CPP (80 MW), located at Village: Rawan, Tehsil: Simga, District: Balodabazar-Bhatapara (Chhattisgarh); the project was considered for ToR in 35th EAC (Industry I) on 10.10.2018 and the project is recommended for ToR. The second interlinked project is the Expansion of Integrated cement plant from Cement(2.75 to 6.75MTPA), Clinker [2.2 to 6.75 MTPA (Line I -2.2 to 2.75 MTPA, Proposed Line II - 4.0 MTPA)], CPP (50MW to 100 MW), DG Set (18 MW to 30 MW) & WHRB (15MW) at Hirni Cement Works, Village: Hirni, Tehsil:Simga, District: Baloda Bazar -Bhatapara (Chhattisgarh); EC has been granted by MoEFCC vide letter No J-11011/586/2011-IA.II (I) on 24.02.2015.

The PP submitted that the total mining lease area is 249.03 ha which spreads in three villages namely Guma, Sarseni and Khapradih and it is a Seismic Zone - III as per IS: 1893 (Part-I): 2002. Out of total mining area, 33.156 ha is a government barren land and 215.874 ha is a private agriculture land. Topography of the ML area is flat with general ground level as 272 m AMSL. The elevation range of the lease area varies from 278.5 m to 267 m above MSL. At present, one cart track exists in mining lease area but as per revenue record, one cart track and one road exist in lease area. Change of land use will be there from agricultural use to industrial use due to mine development, limestone extraction storage, loading/unloading, transportation to plant etc. The PP submitted that mining activity will leave an excavated area at the end of the life of mine. At the conceptual stage, Out of total 201 ha excavated area, 78.30 ha area will be backfilled & remaining 122.7 ha area will be converted into water reservoir. Greenbelt will be developed along the 7.5 m wide lease periphery on 5.40 ha and plantation will be done on 98.63 ha (78.30 ha area on Backfilled and 20.33 ha area on waste dump). 22.30 Ha area will be undisturbed at the end of life of mine due to blasting safety zone 300 m from habitant.

The PP submitted that mining will be done by fully opencast mechanized method. All operations of mining will be done by deployment of Heavy Earth Moving Machineries for deep hole drilling, excavation, crushing, loading & transport. Various mining activities such as drilling, blasting, loading, transportation & crushing will be so conducted as to ensure maximum mineral conservation and minimum environmental degradation. Water table will get intersected during mining operation. The proponent submitted that necessary permission will be taken before intersecting ground water table. The mine working will involve removal of topsoil, drilling with the help of crawler mounted DTH/Top hammer drills, blasting using various types of explosives (ANFO, slurry, SME etc). NONEL detonating fuse will be used since multi row system of firing will be carried to reduce the ground vibration, noise, fly rock etc. due to blasting. Top soil will be stacked separately and will be simultaneously used in plantation.

The PP submitted that blasted limestone will be loaded by large size hydraulic excavators into the dumpers for onward dispatch to the crusher (for limestone) and waste dump (for waste and soil). New crushing plant is proposed, it is a single rotary impact type with wobbler having capacity of 1500 TPH. Before crushing there will be a system to segregate R.O.M in (+) 50 mm and (-) 50 mm through wobbler. Only (+) 50 mm material will be fed to crusher and (-) 50 mm material after screening shall be brought to the product site through separate conveyors discharging the crushed product to desired size

finally to the crusher line conveyor. The transportation of limestone from the working faces to the crusher will be carried out by 55 tonnes capacity rear dumpers which match the loading and excavating units. The average hauling distance from the working faces to the crusher is about 4.0 km to and fro. Crushed limestone will be transported to Rawan cement plant through Road/covered belt conveyors and to Hirmi cement plant via road.

The PP submitted that total water requirement will be 250 KLD which will be sourced from initially from bore wells and later on from mine pit. 2.5 MW power requirement will be sourced from captive power plant located at UTCL and the total manpower will be 89 persons. Total cost of the project is Rs180 Crore and No Court case is pending against the Project. The PP submitted that Dhabadih Reserved forest (~ 4.0 Km in NE Direction) falls within the 10 km radius of the study area. Furthermore, the water bodies such as Mahanadi canal (Adjacent to mine site), Chitwar Nala (~0.5 km in East direction), Tengna Nala (~7.0 km in ESE direction), Risdha Canal (~7.0 km in NE direction), Banjari Nala (~5.0 km in the WNW direction), Kukurdih Talab (~6.5 km in NE direction), Khorsi Nala (~4.0 km in the South direction), Kauwa Nala (~9.0 km in ESE direction) and Jhorkhi Nala (~4.5 km in SSE direction) fall within the 10 km radius of the study area.

The Baseline data collection has been started from December, 2018 considering baseline study period winter season (Dec, 2018 to Feb, 2019). Total water requirement for the proposed Limestone Mining project will be 250 KLD which will be initially sourced from bore wells and later on from mine pit. Total Manpower for the project will be 89 Persons. The total cost of project is Rs. 180 Crore/- The Capital Cost for Environment Protection is Rs. 3.0 Crore/- with Recurring cost of Rs. 0.50 Crore/. Company will spend 1.5% of total project cost under Corporate Environment Responsibility in compliance of MoEFCC OM dated 01.05.2018. No litigation is pending against this project.

Based on the information furnished and presentation made by the PP and discussions held, the Committee **recommended** the Standard TOR as per Annexure-I. The Committee also recommended the following **Specific ToR (Mining)**:

- (i). Status report for the agricultural activities and the habitant,
- (ii). Rehabilitation and Resettlement (R & R) report,
- (iii). Details of the area going to be used for mining and what extend the area could be used for mining.
- (iv). 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.
- (v). PP should submit the details of statutory clearances, permissions, No objection certificates, consents etc. required for this project under various Acts, Rules and regulations.
- (vi). The PP should submit the detailed plan in tabular format (year-wise for 30 years) 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, 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 30 years) 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.

- (vii). The 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. The PP should submit the year wise target for reduction in consumption of ground water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred in this needs to be submitted.
- (viii). The 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).
- (ix). The PP should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance & Corporate Environmental Responsibility needs to be submitted.
- (x). PP should submit the measures to be adopted for prevention of illegal mining and pilferage of mineral needs to be submitted. The procedure for re-conciliation of the material excavated from the mines needs to be submitted, frequency of re-conciliation of the material excavated with material dispatched, material stored within the mining lease area, waste/O.B/reject dumped in the mining lease area, top soil dumped and utilized needs to be submitted. The provision of internal and external audit and how the records of re-conciliation will be maintained. In addition to these details of security arrangements, use of surveillance system, installation of weighbridge, GPS tracking system etc. needs to be submitted. In addition to this conversion factor i.e. specific gravity of all type of material available in the mining lease needs to be submitted along with test certificate from the authorized agency.
- (xi). PP should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.
- (xii). 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 supported with the line source modeling and isopleths. Further, frequency of testing of Poly Aromatic 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.
- (xiii). PP should clearly bring out that what is the specific diesel consumption and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
- (xiv). PP should bring out the awareness campaign to be carried out on various environmental issues, practical training facility to be provided to the environmental

engineers/diploma holders, mining engineers/diploma holders, geologists, and other trades related to mining operations. Target for the same needs to be submitted.

(2.29). Tulsidamar Dolomite Mine of M/s SAIL-Raw Materials Division for mining of Dolomite with annual production capacity of 5.0 lakh tonnes per annum in the mine lease area of 118.72 ha, located in Villages: Tulsidamar & Jangipur, Tehsil -NagarUntari, District Garhwa, State: Jharkhand [File No: J-11015/10/2019-IA.II (M); Proposal No: IA/JH/MIN/77167/2018]-Consideration of TOR

The proposal of M/s Steel Authority of India Limited (SAIL), Raw Materials Division (RMD) for mining of Dolomite with annual production capacity of 5.0 lakh tonnes per annum of Blast Furnace (BF) grade in the mining lease area of 118.72 ha is located in Villages: Tulsidamar & Jangipur, Tehsil -NagarUntari, District Garhwa, State: Jharkhand. The Tulsidamar Dolomite Mine is working since 1975 and is under SAIL-RMD. The PP mentioned that the mining lease area is covered in the Survey of India Toposheet No 63 P/11 and located between Latitude of 24^o 18' 28.011"N to 24^o 19' 18.236" N and Longitude of 83^o 31' 14.782"E to 83^o 32' 2.544"E. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The PP mentioned that Tulsidamar Dolomite Mining Lease was granted on 30.10.1969 for 20 years i.e. up to 29.10.1989, 1st renewal application was submitted on 06.09.1988 for 20 years period i.e. up to 29.10.2009 and 2nd renewal application for 20 years from 30.10.2009 to 29.10.2029 was also submitted as per the provision of the MCR, 1960. The PP further submitted that after enactment of MMDR Amendment Act, 2015, the DMG, Govt. of Jharkhand extended the period of validity of the mining lease up to 31.03.2020 vide letter no. 519, dated 18.03.2015. The PP mentioned that scheme of Mining and Progressive Mine Closure Plan for the Tulsidamar Dolomite Mine has been approved vide letter No. 2337/M dated 09.11.2015 having validity up to 31.03.2019 for the capacity of 5 lakh tonnes per annum. The PP mentioned that consent to operate for the mine was obtained from State Pollution Control Board and renewed it in a respective years; the CTO is valid until 31.03.2020. The PP further mentioned that lease deed for the period up to 31.03.2020 has been executed on 15.05.2018 over an area of 118.72 ha.

The PP submitted that Environmental Clearance for Tulsidamar Dolomite Mine was granted by MoEF vide letter no. J-11015/14/92-IA.II (M) dated 24.03.1995. However EC did not mention the EIA Notification, 1994. As per the Ministry's Notification S.O. 1530(E) dated 06.04.2018 wherein it has mentioned that "the Hon'ble Supreme Court vide judgment dated the 7th February, 2018 in Special Leave to Appeal (Civil) No. 32138 of 2015 in the matter of Goa Foundation versus M/s Sesa Sterlite Ltd., &Ors. has reiterated that the validity of the environmental clearance for mining projects granted under the EIA Notification, 1994 shall be five years" and "whereas, all mining projects mentioned in clause (b) of fourth paragraph above are required to obtain environmental clearance under the EIA Notification, 2006, in pursuance of the aforesaid judgments of the Hon'ble Supreme Court". The clause (b) of the notification is "mining projects, which were granted environmental

clearance under the EIA Notification, 1994, and but not obtained environmental clearance for expansion /modernization / amendment under the EIA Notification, 2006.” Thus the PP submitted the proposal for obtaining Environmental Clearance under EIA Notification, 2006 for mining of dolomite with production capacity of 5.0 lakh tonne per annum in the MLA of 118.72 ha.

The PP submitted that out of total lease area (118.72 ha), 101.32 ha is a forest land and 17.40 ha is a non- forest land and Forest Clearance was granted by MoEF for diversion of entire forest land vide letter no. 8-97/94-TD dated 18.12.1997. The PP mentioned that mine was started as captive mine to Bokaro Steel Plant for supply of Blast Furnace Grade Dolomite which will be used as a Flux. Presently, the dolomite from the mine is dispatched to other SAIL’s Steel Plants. The PP also mentioned that the Dolomite Reserve is 10.57 million tonnes as on 01.04.2018 and the life of mine is 21 years for the production capacity of 5 lakh tonnes/year. Total project cost is 350 lakhs. No Court case is pending against the Project.

The PP submitted that the Semi-mechanized opencast mining method with top slicing deploying shovel–dumper combination is adopted. Followed by blasting of benches, manually sorting and picking of boulders, manually sizing with small hand held hammers by laborers, manually loading into trucks, transporting of products to railway siding at Bhawanathpur for loading onto railway wagons and dispatch to steel plants of SAIL. The PP mentioned that the Back Hoe Hydraulic Excavators and tripper dump trucks are used for the removal of OB/IB. PP further mentioned that blasting is carried out at the mine between 12.00 AM and 2.00 PM during interval of rest. Water requirement is estimated to be 190 m³/day. The number of working days is 300 days and total manpower is 1420 (20 regular employees and 1400 contractual workers).

The Committee observed that the Hon’ble Supreme Court in its judgment dated 02.08.2017 [in the matter of Common Cause Vs Union of India & Ors] at Para 186 (2) clearly mentioned that the renewal of a mining lease after 27th January, 1994 will require an EC even if there is no expansion or modernization activity or any increase in the pollution load. In this instant case mining lease was due for renewal in 2009 and PP needs to obtain the fresh EC as per provisions of the EIA Notification, 2006. **In view of the above, this is a case of violation as PP had not taken EC under the provisions of the EIA Notification, 2006 at the time of renewal of mine lease due in 2009 and the instant proposal may be returned in present form. The Committee is of the view that such project may be appraised as per the provisions of the violation Notification issued by the MoEF&CC vide S.O. 804 (E) dated 14th March 2017. The Ministry may take further necessary action on violations.**

(2.30). Vijay-II Iron Ore Mining Project of M/s Usha Martin Ltd with expansion of production capacity from 2.5 to 4.0 MTPA in the MLA of 155.078 ha located in Village Ghatkuri, Tehsil Noamundi, District West Singhbhum, Jharkhand. [File No: J-11015/11/2019-IA.II (M); Old File No. J-11015/507/2007-IA.II (M); Proposal No: IA/JH/MIN/58475/2016]- Consideration for TOR

The proposal of M/s Usha Martin Ltd is for mining of Iron with expansion in production capacity from 2.5 MTPA to 4.0 MTPA in the mining lease area of 155.078 ha. The mine is located in Village Ghatkuri, Tehsil Noamundi, District West Singhbhum, Jharkhand. As per the EIA Notifications 2006, It is a Category "A" Project, 1(a) Mining of minerals. The MLA is covered in the Survey of India Toposheet No T73/F8. The lease area falls under latitude of N22009'51"- N22011'13"and longitude of E85020'27"- E85021'43".The PP submitted that the total mining lease area is a forest land and the mining lease area falls within Singhbhum Elephant Reserve in Ghatkuri Reserve Forest under Saranda Forest Division.The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

PP reported that the total mine lease area is 155.078 ha. Out of which PP has earmarked 94.83ha for Mining, 14.44ha for Overburden Dumps, 10.10ha for Green Belt, 1.50 ha for Roads, 0.30 ha for Statutory Building ,2.50 ha for Mineral Rejects, 0.25 ha for Top Soil, 12.20 ha for Sub-grade Mine seal Dumps, and 18.958 ha for Afforestation. The PP submitted that open cast mechanized using Drilling - Blasting - Shovelling - Trucking processes. PP also mentioned that the ore is softer in nature, only 70% of the material requires blasting and maximum bench height of 9m is being followed. Ore is trucked to crusher while waste is trucked to the earmarked waste dump area. The average stripping ratio is 0.10 tonnes waste to per tonne of ore. The PP further mentioned that reserves are estimated @ 45% Fe cut-off. The average grade of the deposit at this cut-off is 56.30% Fe. Mineral with Fe is between 45% to 55% which is classified as Subgrade ore by IBM and PP plans to consume such subgrade mineral as ore. The PP mentioned that there are seven first order seasonal streams & part oftheir catchment will be disturbed due to mining. The total water requirement is 250 KLD and the source of water shall be bore wells located outside the mining lease, rain water harvesting structure within the mine and Karo river. The PP also mentioned that the total manpower is 721 out of this 390 will be a local people and the total project cost is 4500 lakhs.

Total Mining Lease Area is 155.078 ha which is forest area. The project has obtained forest diversion for the entire lease hold area of 155.078 ha excluding safety zone (8.6073 ha) area, granted by the MoEF, New Delhi, vide letter No. 8-88/2007-FC(pt), dated 09.11.2012. The Ministry has granted two environmental clearances to the project: (i) J-11015/48/2001-IA.II(M) dated 19.04.2005 for annual production of capacity 0.65 LTPA under Phase-I& (ii) J-11015/507/2007-IA.II(M) dated 22.12.2008 for enhancement of production to 2.5 MTPA.

The Member Secretary, EAC (Non-Coal) informed the Committee that a Carrying Capacity Study in Saranda Forest division in State of Jharkhand is coordinated by FC

Division based on the Report on illegal mining of iron and manganese ore by Justice M.B. Shah. The instant mine lease area also falls in West Singhbhum District area. The FC Division has finalized the Management Plan for Sustainable Mining (MPSM) and delineation of mining Zone in Saranda and Chaibasa in Singhbhum District, Jharkhand under Carrying capacity Study. The Committee is of the view that in first instance the Non coal mining sector may seek comments from FC Division or State Govt. of Jharkhand (Forest Department) that ***whether EC for this instant proposal may be considered based on outcome of "Management Plan for Sustainable Mining (MPSM) and delineation of mining Zone in Saranda and Chaibasa in Singhbhum District, Jharkhand under Carrying capacity Study" or not. That is this instant mine lease area is falling in mining zone or conservation zone.***

Based on the information furnished and presentation made by the PP and discussions held, the Committee **deferred** the proposal. The same may be considered after submission of the following information/clarifications:

- (i). The Non coal mining sector may seek comments from FC Division or State Forest Department, Govt. of Jharkhand that *whether EC for this instant proposal may be considered based on outcome of "Management Plan for Sustainable Mining (MPSM) and delineation of mining Zone in Saranda and Chaibasa in Singhbhum District, Jharkhand under Carrying capacity Study" or not. That is this instant mine lease area is falling in mining zone or conservation zone.*
- (ii). **DSS/KML shows that PP has carried out the mining activities outside of the mine lease area. In this context, Ministry has to seek reports from the State Mines and Geology Department w.r.t. mining activities outside of the mine lease area and take necessary actions accordingly.**
- (iii). Details and updated status of Inquires related to this mining projects case.
- (iv). Details and status of Hon'ble Jharkhand High Court's order whether the court allowed to carry out the mining activity or not.
- (v). Details of payment/compensation towards Hon'ble Supreme Court Judgment dated 02.08.2017 in the matter of Common cause judgment.
- (vi). Details of Greenbelt development.
- (vii). PP has submitted some of the documents as per S. No. 2 of the Agenda Item. The Committee is of the view that PP needs to submit all the documents w.r.t. S. No. 2 of the Agenda Item and other documents as summarized in the Agenda of the meeting.

(2.31). Aniali Rana Bordi Limestone Mining Project (Survey No 207/P) of M/s Tata Chemicals Ltd. for expansion in production of Limestone from 0.043 million TPA of limestone to 0.175 Million TPA (ROM) in a mine lease area of 21.04 Ha, situated near Village Aniali, Tehsil Rananav, District Porbandar, State Gujarat [File No: J-11015/12/2019-IA.II(M); Old File No. J-11015/309/2012-IA.II (M); Proposal No: IA/GJ/MIN/88217/2018]-Consideration of TOR

The proposal of M/s Tata Chemicals Ltd. is for mining of Limestone with expansion in production of limestone from 0.043 million TPA of limestone to 0.175 Million TPA (ROM) in the mining lease area of 21.04 ha. The survey no 207/P of Aniali RanaBordi Limestone Mining Project is situated near Village Aniali, Tehsil Rananav, District Porbandar, State Gujarat. As per EIA Notifications 2006, it is a Category "A" Project as the project is located at 4.2 km from the Barda Wild Life Sanctuary. The MLA comes under Seismic Zone-III. The MLA is covered in the Survey of India Toposheet No 41G/4. The latitude and longitude of the leases are latitude of 21° 42' 22.040" N and longitude of 69° 49' 39.381" E. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The proponent submitted that the mining lease area of 21.04 ha was granted in favor of M/s Tata Chemicals vide order no MCR/1565/13877/CHH dated 07.07.1966 for extraction of limestone. The lease was executed on 23.12.1966 for a period of 20 years. First renewal of mining lease was applied on 20.04.1987. The mining lease was renewed vide order No. MCR-1585-(T-44)-4267-CHH dated 28.12.2004 with effect from 23.12.1986 for 20 next years and the second renewal was applied on 17.11.2005 for next 20 years. However, the PP mentioned that as per the MMDR Amendment Act, 2015, the Industries and Mines Department of Gujarat Government has considered for the lease period extension to 31.03.2030. PP has not submitted any extension of validity letter from state government of Gujarat. The mining plan was approved by IBM vide letter no.682 (23) (713)/2009-MCCM (N) dated 26.12.2006 with a validity up to 31.03.2020.

The PP submitted that Environmental Clearance were granted by MoEF & CC vide Letter No J-11015/309/2012-IA.II (M) on dated 27.07.2015 for the production capacity of 0.043 million TPA of limestone in the MLA of 21.04 ha. PP mentioned they intended to enhance the limestone production capacity to 175000 TPA and planned to exploit the limestone reserves in its 3 leases in Aniali Village, which incidentally have common boundary. The PP also submitted that the total MLA is a waste land, no forest land and no court case pending against the MLA.

The proponent submitted that open cast semi mechanized mining method with adoption of drilling and blasting is proposed to be adopted. The shovel dumper combination also proposed for mining operation. Benches of maximum 5m height, ramp gradient 1 in 16, drilling 102 mm dia deep hole blasting, excavation by diesel operated hydraulic excavator into tipper trucks, transportation of mineral from mine site to destination through tipper trucks. Bench slope angles maintained at 80°. The PP informed that a crushing/sizing plant is proposed in the lease area in the non-mineralized zone, an MMD make "sizer" crushing

plant of 1500 TPD capacity and L&T make power screen planned to install at the suggested location in the lease area. The PP informed that until the proposed crushing and screening unit will be installed or in case of major breakdown of the mechanized operation or on non-viability of the crusher and screening plant, the ROM will be transported to a registered sizing plots nearby the mines and maintained by a contractor for manual sizing of the chemical grade limestone. The PP informed that total reserve is 1229000 Tones and the expected life of mine is 7 years. The manpower is 30 and the average number of working days is 300 in a year. The cost of the project is Rs. 1crore.

The proponent submitted that total water requirement is proposed for expansion is 50.0 KLD. 10 KLD (Drinking & Domestic Uses) + 25KLD (Plantation) + 15 KLD (Dust Suppression). Out of the 50 KLD, 10 KLD will be sourced from ground water for which CGWA permission is granted in the year 2011, the PP did not submit the same. The additional 40 KLD water which is proposed for capacity expansion will be sourced from nearby village Aniali through water tankers. For the same, NOC from Gram Panchayat-Aniali is granted to TCL; however, the PP did not submit the same.

The PP submitted that the Barda Wildlife Sanctuary and Mokarsagar Bird Sanctuary are located app. 4.2 Kmin NW direction and app. 11.5 Km in SW direction from the project site. Furthermore, the PP informed that the MLA is close to the water bodies such as Bileswari River (app. 6.0 km in NE direction), Minsar River(app. 5.5 km in East direction), Khambhada Water Reservoir (app. 7.0 km in NW direction) and Fodara Water Reservoir (app. 11.0 km in NW direction), respectively.

The PP also presented the KML file during the presentation to indicate the location of mine lease. Based on the information furnished and presentation made by the PP and discussions held during the EAC, **the Committee noted that the some part of MLA is located within notified Eco-Sensitive Zone and mining activity is prohibited in the ESZ.** The Committee deliberated the issues and **returned the proposal in present form** and suggested that PP may revise the mine lease area so that MLA should not fall within ESZ. **The Committee also suggested to seek the Report from the State Department of Gujarat for details of mining activity if PP conducted in ESZ or not and accordingly take necessary actions.**

(2.32). Proposed Limestone Mine (ML Area: 575.830 ha) with Limestone Production Capacity - 4.0 Million TPA, Top Soil/Sub Soil - 1.25 Million TPA, Waste (OB/IB/Shale) - 1.00 Million TPA & Screen Rejects - 0.40 Million TPA (Total Excavation - 6.65 Million TPA) along with Installation of Crusher - 1200 TPH Capacity with Wobbler at Villages: Bairiha, Patrahai & Janardhanpur, Tehsil: Rampur Baghelan, District: Satna (Madhya Pradesh) by M/s Dalmia Cement (Bharat) Limited. J-11015/13/2019-IA.II(M) IA/MP/MIN/89876/2018 -Consideration of TOR

The proposal is of M/s Dalmia Cement (Bharat) Limited for proposed Limestone Mine (ML Area: 575.830 ha.) with Limestone Production Capacity 4.00 Million TPA, Top Soil/Sub Soil 1.25 Million TPA, Waste (OB/IB/Shale) 1.00 Million TPA & Screen Rejects 0.4

million TPA (Total Excavation - 6.65 Million TPA) along with Installation of Crusher - 1200 TPH Capacity with Wobbler. The mine lease is located at Villages Bairiha, Patrahai & Janardanpur, Tehsil Rampur Baghelan, District Satna (Madhya Pradesh). The area is located on Survey of India Toposheet no G44V2 (63 H/2) in core zone and G44V2 (63 H/2), G44U14 (63D/14), G44U15 (63D/15), G44V3 (63H/3) in buffer zone. The Latitude and Longitude of the mine site falls between Latitude of 24°34'0.3095" N to 24°35'48.2047" N and Longitude of 81°02'42.3126" E to 81°05'32.0272" E. As per EIA Notification dated 14.09.2006, this project falls in Category 'A' Project or Activity 1(a) - 3 for "Mining of Mineral" and Project or Activity 2 (b) - 3 for "Mineral Beneficiation (Crusher with Wobbler)". The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

Total Mine Lease Area is 575.830 ha, out of which, 567.182 ha is private land and 8.648 ha is Govt. land. There is no Forest land involved in the Mine lease area. Government of MP granted prospecting license over an area of 724.541 ha vide order no F14-20/2008/12/1-66531 dated-27.12.2012. Subsequently LOI was granted for mining lease over an area of 575.832 ha by the State Government vide its letter no. F 3-8/2014/12/1 dated 18.01.2018. Inadvertently the State Govt. wrote 575.832 ha in place of 575.830 ha. The lessee applied for rectification of the grant order and the State Govt. vide their order no. F-3-8/2014/12/1 dated 28.08.2018 has rectified the area of area in LOI from 575.832 to 575.830 ha. Mining Plan with Progressive Mine Closure Plan was approved by IBM vide letter No MP/Satna/Limestone/MPLN/G-29/18-19 dated 06.12.2018.

Mining operations will be carried out by fully mechanized opencast conventional method by deploying heavy earth moving machineries. The mining operation will involve Top soil/ overburden/waste removal, Drilling, Blasting, excavation, loading-unloading, transportation and crushing. Excavated limestone will be transported to the crusher via dumpers. The capacity of crusher will be 1200 TPH. Material (ROM Limestone) will be unloaded in RCC Hopper of 100 / 150 CuM with low level sensor. The design of hopper shall be suitable for 3-side dumping with dust Suppression system. It is proposed to screen the top bench limestone. Wobbler of 1200 TPH has been considered with 2100 mm X 4500 mm with a separation size of 75 mm. The Limestone will be blended suitably using the stacker reclaimer in the cement plant in the best interest of mineral conservation. Auto Sampler & Table Top XRF analyzer will be installed for conservation of mineral by proper blending. Suitable blending of ROM limestone will be done using the stacker reclaimer in the Cement plant. The cut-off grade will be brought to threshold value in the best interest of mineral conservation. Crushed limestone will be transported to the proposed Cement Plant from mine site by covered conveyor belt of about ~3 km and may be by road initially till the conveyor belt gets in operation and during emergency/breakdown situation. Total geological resources are 133.66 million tonnes & minable reserves are 40.47 Million tonnes. The estimated life of mine is 14 years which is likely to extend after further drill exploration. At conceptual stage total excavated area will be 467.145 ha, out of which 210.20 ha will be backfilled. Out of the backfilled area, 55.92 ha will be under plantation and remaining 154.28 ha area will be rehabilitated by agriculture. Plantation/Greenbelt will be developed in phases over an area of about 40 ha in safety zone including 7.5 m safety barrier along the ML boundary till conceptual stage. Remaining 65.685 ha area is currently proposed as

undisturbed under safety barrier along habitation and other mining constraints etc.

Top soil shall be used for plantation and remaining will be stacked separately at earmarked area of about 9 ha. Proposed height of topsoil dump shall be about 20 m during plan period within ML. Waste (OB/IB/Shale) will be used for preparation of the ramp to crushing unit and platform for unloading the material in to hopper and recurring of dumpers etc. There is no proposal for stacking of the OB as it is proposed for simultaneous backfilling of mined out area. The backfilling will be mostly up to the ground level. Topsoil will be used for topping of the backfilled area. At the conceptual stage there will be no dump.

PP reported that there is no National Park, Wild Life Sanctuary, Biosphere Reserve, Tiger Reserve and Wildlife Corridor etc. within 10 km radius of study area. Nearest Reserve Forest i.e. Sarthari Reserve Forest at approx 0.25 km in WNW direction. Water bodies i.e. Dila Nala, Nar Nadi, Tons River, Jura Nala, Bakna Nala, Mainha Nala, Karian Nala, Magardaha Nala, Simrawal Nala exist within study area. Total water requirement for the proposed Limestone Mine is estimated about 90 KLD which will be sourced from Ground water & Mine pit water as and when developed. Total estimated Power requirement is about 1 MW which is proposed to be sourced from MPEB and Interlinked Cement Plant. Total Manpower for the project will be 69 Persons.

The total estimated cost of project is Rs. 22 Crore/-. Additionally, about Rs. 250 Cr is estimated as land cost. The Capital Cost for Environment Protection is Rs. 2 Crore/- with Recurring cost of Rs. 50 lakhs per annum. Company has been earmarked Rs. 44.0 lakh under Corporate Environment Responsibility in compliance of MoEFCC OM dated 01.05.2018. No litigation is pending for this project.

Based on the information furnished and presentation made by the PP and discussions held, the Committee **recommended** the Standard TOR as per Annexure-I & II. The Committee also recommended the following **Specific ToR:-**

- (i). Mitigation measures as per the Ministry's OM no Z-11013/57/2014-IA.II(M) dated 29.10.2014- 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.
- (ii). Specific R&R plan with the budget allocation for PFA's.
- (iii). Quantitative plan for the issues raised during public hearing and the implementation plan with timeframe and budget,
- (iv). Committee deliberated on the proposal and noted from the KML/ SHP file that the lease boundary is adjacent to the habitats. Hence, PP need to prepare a strategic mining plan with adequate safeguards to protect the habitats along with necessary safeguard shall be prepared while preparing the EIA/EMP report.
- (v). 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.

- (vi). PP should submit the details of statutory clearances, permissions, No objection certificates, consents etc. required for this project under various Acts, Rules and regulations.
- (vii). The PP should submit the detailed plan in tabular format (year-wise for 30 years) 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, 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 30 years) 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.
- (viii). The 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. The PP should submit the year wise target for reduction in consumption of ground water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred in this needs to be submitted.
- (ix). The 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).
- (x). The PP should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance & Corporate Environmental Responsibility needs to be submitted.
- (xi). PP should submit the measures to be adopted for prevention of illegal mining and pilferage of mineral needs to be submitted. The procedure for re-reconciliation of the material excavated from the mines needs to be submitted, frequency of re-reconciliation of the material excavated with material dispatched, material stored within the mining lease area, waste/O.B/reject dumped in the mining lease area, top soil dumped and utilized needs to be submitted. The provision of internal and external audit and how the records of re-reconciliation will be maintained. In addition to these details of security arrangements, use of surveillance system, installation of weighbridge, GPS tracking system etc. needs to be submitted. In addition to this conversion factor i.e. specific gravity of all type of material available in the mining lease needs to be submitted along with test certificate from the authorized agency.
- (xii). PP should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.
- (xiii). 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 supported with the line source modeling and isopleths. 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.

- (xiv). PP should clearly bring out that what is the specific diesel consumption and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
- (xv). PP should bring out the awareness campaign to be carried out on various environmental issues, practical training facility to be provided to the environmental engineers/diploma holders, mining engineers/diploma holders, geologists, and other trades related to mining operations. Target for the same needs to be submitted.

(2.33). Proposal under the provision of Notification dated 06.04.2018 of Nimbahera-Ahripura Limestone Mine (Area:403.1875 Ha) located at Village – Ahirpura & Murlia, Tehsil – Nimbhera, District – Chittorgarh (Rajasthan) with production capacity of 2.0 MTPA of mineral Limestone by M/s JK Cement Ltd.[File No: J-11015/83/2004-IA. II(M); Proposal No. IA/RJ/MIN/11656/2018; Consultant:]-ToR Regarding

The proposal of M/s JK Cement Ltd. is for Nimbahera-Ahripura Limestone Mine (Area: 403.1875 Ha) located at Village – Ahirpura & Murlia, Tehsil – Nimbhera, District – Chittorgarh (Rajasthan) with production capacity of 2.0 MTPA of Limestone. The Project Proponent submitted that mining lease area falls under Survey of India Topo-Sheet No. 45 L/10 and between Latitude: N 24°38'10.397" to N 24°41'14.503" & Longitude: E 74°38'42.003" to E 74°41'02.730" and in Seismic Zone –II. The PP presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

The project falls under Schedule 1(a) of mining and is a Category- "A" as the mining lease area is greater than 100 Ha. Further, PP submitted that M/s JK Cement Ltd has obtained EC under the EIA Notification 1994, vide Ministry's letter No. J-11015/83/2004-IA.II (M) dated 30.05.2005 for the production 2.0 MTPA of mineral Limestone.

As per the Ministry's Notification S.O. 1530(E) dated 6.04.2018 wherein it has mentioned that "the Hon'ble Supreme Court vide judgment dated the 7th February, 2018 in Special Leave to Appeal (Civil) No. 32138 of 2015 in the matter of Goa Foundation versus M/s Sesa Sterlite Ltd., & Ors. has reiterated that the validity of the environmental clearance for mining projects granted under the EIA Notification, 1994 shall be five years" and "whereas, all mining projects mentioned in clause (b) of fourth paragraph above are required to obtain environmental clearance under the EIA Notification, 2006, in pursuance of the aforesaid judgments of the Hon'ble Supreme Court". The clause (b) of the notification is "mining projects, which were granted environmental clearance under the EIA Notification, 1994, and but not obtained environmental clearance for expansion / modernization / amendment under the EIA Notification, 2006." In the instant case the M/s JK Cement Works has obtained the EC under EIA Notification 1994 for expansion of production of Nimbahera-Ahripura Limestone Mine (Area: 651.31 Ha) located at Village – Ahirpura & Murlia, Tehsil – Nimbhera, District – Chittorgarh (Rajasthan) from 1.4 MTPA to 2.0 MTPA vide Ministry's letter No. **J-11015/83/2004-IA.II(M) dated 30.05.2005** and now applied for EC for production capacity of 2.0 MTPA of mineral Limestone for retained area 403.1875 Ha. As per the notification the PP shall make application within six months (i.e. up to 5.10.2018) from

the date of issue of this notification in Form-1 as given in Appendix-II of the EIA Notification, 2006, for grant of environmental clearance under the provisions of the EIA Notification, 2006, and all such applications shall be considered by the concerned Expert Appraisal Committee or the State Level Expert Appraisal Committee, as the case may be, who shall decide on the due diligence necessary including preparation of Environmental Impact Assessment Report and public consultation and the application shall be appraised accordingly for grant of environmental clearance.

The PP as per the notification S.O.1530 (E) dated 06.04.2018 applied on 26.09.2018 and the EDS was raised online on 09.10.2018. PP vide its letter No. NBH/PC-11(C)/27-29 dated 15.11.2018 submitted the reply of EDS and submitted the revised Form-1. The proposal is placed in EAC Meeting held on 22-23 January 2019.

The PP submitted that the mining lease was granted for an area of 652.3125 Ha in favour of M/s JK Cements Works vide Lr No. F-14(35) Ind/B/65 dated 30.12.1967. PP submitted that the lease was renewed vide Lr no. P-4 (20) Khan/Group-2/87 dated 26.04.1989 for the period of 23.02.1988 to 22.02.1998 and the same was again renewed vide Lr. No. P-16 (49) Khan/Group-1/97 dated 24.01.2002 for the period of 23.2.1998 to 22.2018. PP has submitted that an area of 249.125 Ha was surrendered due to low grade limestone vide Lr. No. AME/NIMBA/CC1/ML 2/97/Renewal/ 947 dated 14.05.2008. PP has submitted a letter No. सखअ/निम्बा/सीसी-1/एमएल 2/1997/2028 dated 27/02/2015 wherein it has mentioned that as per Rule 8A (5)/8A (6) MMDR Act 2015 the validity of mining lease is extended up to 31/03/2030. The PP submitted that modified mining plan with progressive mine plan with closure plan for retained area 403.1875 Ha has been approved vide Lr No. 682 (23)(MP-571)/2007-II MCCM (N) Udai dated 22.02.2016 for the period 2016-17 to 2019-20. PP submitted that the mining will be open cast mechanized mining with drilling and blasting.

PP has submitted that the General Condition is not applicable for the project and the project does not require clearance under Forest Conservation Act, 1980, Wildlife Protection Act, 1972. The PP also mentioned that the total water requirement for the project will be 20 KLD (1.5 KLD for domestic purpose, 10 KLD for dust suppression, 7 KLD for plantation and 1.5 KLD for mine operation). PP submitted that the domestic water demand will be met from tube well while for dust suppression and plantation will be met from existing water reservoir pit (rain water). PP submitted that renewal of NOC for ground water withdrawal through dewatering the mine seepage on account of mining intersecting the water table has been obtained from office of CGWA, Ministry of water resources, River Development & Ganga Rejuvenation vide letter no. 21-4(34)/WR/CGWA/2005-907 dated 14.05.2018 for 2427 KLD. PP submitted that as per revenue records 131.1175 Ha Govt. land, 195.64 Ha private land, 57.22 Ha grazing land and 19.21 Ha industrial land. PP submitted that the total excavated area will be 112.39 Ha, which will be used as water reservoir. 12.75 Ha will be used as sub grade stack management and in 52.53 Ha plantation will be done. PP submitted that total waste generation in first five years shall be 0.145 Million Tonnes. PP submitted that the total project cost shall be 21.30 Crore and will provide direct employment to 79 persons.

PP has submitted the past production details duly authenticated from DMG 01.03.1985-28.02.1986 to 01.04.2017-31.03.2018. PP has submitted that copies of CTO, CTE issued from RSPCB from time to time for the period from 1999 to 2017. PP has submitted that the last CTO was issued by RSPCB vide Lr. No. F (Mines)/Chittorgarh(Nimbahera)/1869 (1)/2017-2018/2136-2140 dated 20.06.2017 for mine lease area 403.1875 and capacity 2.0 Million TPA and the same is valid up to 31.05.2022. PP submitted certified compliance report certified by Regional Office Lucknow vide Lr. No. IV/ENV/R/Mine-224/334/2005/206 dated 05.10.2017.

Based on the discussion held and document submitted by the PP, the Committee has following observation:

- a) The Committee observed that as reported by PP the lease area was reduced in 2008 and PP then applied for amendment in EC for reduction of the lease area and installation of crusher. But the previous EAC only recommended for reduction in lease area but before amendment was issued the Ministry has issued S.O. 1530(E) dated 06.04.2018 and PP has now applied as per this notification.
- b) The Committee observed that the production in base year 1993-94 was 1625021 and the same has been increased in 1994-95 and required prior EC. Thus there is violation of Common Cause Order dated 02.08.2017 for which PP has already submitted an undertaking in pursuant to Ministry's O.M. No 3-50/2017-IA.III(Pt.) dated 30.05.2018. The Committee also noticed that PP has not achieved the already approved production capacity.
- c) The Committee observed that in the modified mining plan the area already under mining is mentioned as 86.29 Ha (as against 77.40 Ha mentioned in the previous EC), the topsoil generation will be 4895.10 m³ as against 3156 m³ proposed in previous EC, the total excavation mentioned in the modified mining plan is 686373.01 m³ (i.e. around 1715933 Tonne). The Committee also noted that previous EC was granted for a capacity of 2.0 Million Tonne/annum and as long as the total excavation is within this limit there is no increase in the pollution load. Further, as public hearing has already been conducted on 19.05.2004 there is no requirement of fresh public hearing till the total excavation (quantity of limestone + waste/Overburden/side burden/inter burden and top soil) remains within 2.0 Million TPA.

The Committee therefore **recommended** the proposal of M/s JK Cement Ltd. for Total Excavation of 2.0 Million TPA [Production Limestone, Waste & topsoil] from Nimbahera- Ahripura Limestone Mine (Area: 403.1875 Ha) located at Village – Ahirpura & Murlia, Tehsil – Nimbhera, District – Chittorgarh, for prescribing Standard Term of Reference along with following Specific Term of Reference for preparation of EIA/EMP report after collecting one season base line data and after incorporating the issues raised during public hearing conducted on 19.05.2004 and commitment fulfilled by the PP. The ToR granted is **subject to submission** of break-up of total excavation quantity and examining the proposal in light of Common Cause Order dated 02.08.2017 & S.O. 804(E) dated 14.03.2017.

(2.34). Karadikolla Iron Ore Mine, ML No. 2546 of M/s Chowgule and Company Private Ltd. over an area of 459.73 ha with proposed production capacity of 0.38 MTPA located at Bavihalli Village of Sandur Taluka, Bellary District, Karnataka [File No. J-11015/162/2018-IA.II(M); Proposal No. IA/KA/MIN/75923/2018]–Consideration of Proposal under EIA notification 2006 and Ministry’s Notification vide S.O. (E) 1530, dated 06.04.2018-Re-consideration of TOR

The project proponent **did not attend** the meeting.

(2.35). Proposal for extension of validity of the EC granted vide Lr No. J-11015/64/2014-IA-II(M); dated 14th May, 2015 to M/s Public Works Department, State Government of Tamil Nadu for Quarrying River sand in u/s and d/s of Kattalai Bed Regulator in Cauvery River with production capacity of 15,18,958 m³ over and extent of 256.06 ha located at Village Mayanur Tehsil – Krishnarayapuram, District- Karur, Tamil Nadu (File No. J-11015/64/2014-IA-II(M); Proposal No. IA/TN/MIN/23694/2013) - Extension of validity of the EC

The proposal of M/s Public Works Department, State Government of Tamil Nadu is for extension of validity of the EC granted vide Lr No. J-11015/64/2014-IA-II(M) dated 14th May, 2015 to M/s Public Works Department, State Government of Tamil Nadu for Quarrying River sand in u/s and d/s of Kattalai Bed Regulator in Cauvery River with production capacity of 15,18,958 m³ over and extent of 256.06 ha located at Village Mayanur Tehsil – Krishnarayapuram, District- Karur, Tamil Nadu

The PP submitted that no forest land is involved in the mining lease area. There is no wild life sanctuary within 10Km radius from the project site area. The quarry is located around 200 km away from Bay of Bengal. There is no litigation pending against this project. Mining is by open cast semi mechanized, shallow mining on sand shoals above the River bed. There is no permanent or temporary change in land use. The Project land site is classified as Govt. River Poramboke land.

The PP submitted that in the EC granted vide Lr. No. J-11015/64/2014-IA-II(M) dated 14th May, 2015 in para 3 it has mentioned that life of mine is 3 years. The PP has mentioned that quantity of sand could not have been exhausted due to flow in the river and storage of water in the newly constructed barrage and due to this reason the project was not completed in 3 years. The PP has now requested for extension of validity for 3 more years online. Accordingly, the proposal is now placed in EAC Meeting held during January 22-23, 2019 wherein the Committee **deferred** the proposal as **PP did not attend the meeting.**

(2.36). Proposal for extension of validity of the EC granted vide Lr No. J-11015/343/2013-IA.II(M); dated 14th May, 2015 to M/s Public Works Department, State Government of Tamil Nadu for Quarrying River Sand in u/s and d ,247 m³ over an extent of 196.25 ha, located at Village

Sriramasamuthiram/Silaipillayaputtur, Tehsil- Thottiyam, District-Trichy, Tamil Nadu (File No.J-11015/343/2013-IA.II(M); Proposal No. IA/TN/MIN/20350/2013) Extension of validity of EC

The proposal of M/s Public Works Department, State Government of Tamil Nadu is for extension of validity of the EC granted vide Lr No.J-11015/343/2013-IA.II(M) dated 14th May, 2015 to M/s Public Works Department, State Government of Tamil Nadu for Quarrying River sand in u/s and d/s of Kattalai Bed Regulator in Cauvery River with production capacity of 15,01,247 m³ over and extent of 196.25 ha located at Village Sriramasamuthiram /Silaipillayaputtur, Tehsil- Thottiyam, District- Trichy, Tamil Nadu.

The PP submitted that no forest land is involved. There is no wild life sanctuary within 10Km. radius from the project site area. The quarry is located around 200 km away from Bay of Bengal. There is no litigation pending against this project. Mining is by open cast semi mechanized, shallow mining on sand shoals above the River bed. There is no permanent or temporary change in land use.

The PP submitted that in the EC granted vide Lr. No. J-11015/343/2013-IA. II(M) dated 14th May, 2015 in para 3 it has mentioned that life of mine is 3 years. The PP has mentioned that quantity of sand could not have been exhausted due to flow in the river and storage of water in the newly constructed barrage and due to this reason, the project was not completed in 3 years. The PP has now requested for extension of validity for 3 more years online. Accordingly, the proposal is now placed in EAC Meeting held during January 22-23, 2019 wherein the Committee **deferred** the proposal as **PP did not attend the meeting.**

(2.37). Devadari Iron Ore Mine of M/s KIOCL Ltd. for Mining of 2 MTPA Iron Ore & 500 TPA of Manganese & setting up of 2 MTPA beneficiation plant including crushing, screening, conveying in total area of 485.7725 ha (ML Area 470.40 ha and 15.3725 ha) outside ML for conveyor corridor/ power transmission line / approach road) in Devadari Range, Sandur Taluk, Bellary District, Karnataka State [File No: J-11015/28/2018-IA-II(M); IA/KA/MIN/72345/2018]-Amendment in TOR.

The proposal of M/s KIOCL Limited is for an opencast mine of capacity 2 MTPA of Iron Ore (ROM) and 500 TPA of Manganese Ore. The project proponent also informed that the company will establish 2 MTPA Beneficiation Plant including Crushing, Screening, Conveying at the mine site. Multilevel crushing, screening, grinding, gravity and magnetic separation, thickening will be carried out to produce CLO and Filtered concentrate from ROM feed of 2 MTPA. The mine is located on west of Donimalai, which is 10 km southeast of Sandur town and 70 km from Bellary town. The proposed area is bounded by latitudes 15°1'18.18627"N & 15°3'43.60179"N and longitudes 76°34'35.0174"E & 76°36'12.77452"E in Survey of India Toposheet no. 57 A/12. Highest elevation is 1000 m MSL & Lowest elevation is 720 m MSL.

The project proponent submitted that the Karnataka State Government has reserved an area of 470.40 ha in favour of M/s KIOCL Limited, for Iron and Manganese Ore in Devadari Range, Sandur Taluk, Bellary District, Karnataka State, vide notification no. CI 294 MMM 2015, Bengaluru dated 23.01.2017 in pursuance of the approval by Ministry of Mines, Govt. of India, New Delhi vide letter No. 4/3/2016-M. VI dated 05.12.2016. The Department of Mines & Geology vide letter No. DMG/MLS/Res.KIOCL/2016-17/10301 dated 13.02.2017 issued Letter of Intent. Project Proponent has submitted application for Forest Clearance vide Proposal No. FP/KA/MIN/32568/2018 dated 16.03.2018.

The project proponent submitted the proposal for the grant of ToR for 2 MTPA Iron Ore (ROM) & 500 TPA Manganese & Wet Beneficiation Plant including Crushing, Screening, Conveying for a capacity of 2 MTPA in a total area of 482.367 ha (ML Area 470.40 ha and 11.967 ha outside ML for conveyor corridor/ road). The proposal was considered in the EAC meeting held on 23-24 April 2018 wherein the Committee recommended the proposal for the grant of ToR for 2 MTPA Iron Ore (ROM) & 500 TPA Manganese & Wet Beneficiation Plant including Crushing, Screening, Conveying for a capacity of 2 MTPA in a total area of 482.367 ha (ML Area 470.40 ha and 11.967 ha outside ML for conveyor corridor/ road). The Ministry has issued the TOR vide letter No. J-11015/28/2018-IA-II (M) dated 16.05.2018.

The project proponent submitted the proposal on 27.11.2018 for amendment in TOR by changing the total area from 482.367 ha to 485.7725 ha by keeping the ML area of 470.40 ha constant, but change in the area outside the ML area from 11.967 ha to 15.3725 ha for conveyor corridor/ power transmission line / approach road.

The proposal for amendment in TOR was considered by the EAC in its meeting held during 22-23 January 2019. Based on the presentation made and details submitted by PP, the Committee **recommended** the proposal for amendment of changing the total area from 482.367 ha to 485.7725 ha by keeping the ML area of 470.40 ha constant, but change in the area outside the ML area from 11.967 ha to 15.3725 ha for conveyor corridor/ power transmission line / approach road in the TOR for 2 MTPA Iron Ore (ROM) & 500 TPA Manganese & Wet Beneficiation Plant including Crushing, Screening, Conveying for a capacity of 2 MTPA in a total area of 485.7725 ha.

(2.38). Mining of Beach Sand Mineral with enhancement of production capacity from 2,37,150 TPA to 7,50,000 TPA by M/s Indian Rare Earth Limited, located at village(s)- Alappad, Panmana and Ayanivelikulangara, Tehsil-Karunagappally, District-Kollam, Kerala (180ha) [File No: J-11015/227/2015-IA-II(M); Proposal No: IA/KL/MIN/25461/2014] (Consultant-NIIST, Thiruvanthapuram)-Amendment in TOR

The Proposal of M/s Indian Rare Earth Limited is for Mining of Beach Sand Mineral with enhancement of production capacity from 2, 37,150 TPA to 7, 50,000 TPA. The mine lease area is located at village(s)-Alappad, Panmana and Ayanivelikulangara, Tehsil-Karunagappally, District-Kollam, Kerala in MLA of 180ha. The latitudes and longitudes of the Mine Lease area lies between 09°00'55.97" to 09°02'3.80" N, 76° 31'17.19" to 76° 30'29.90"E.

The project proposal was earlier considered in the EAC meeting held during 24-26 June 2015 wherein the Committee prescribed the Standard TOR for undertaking detailed EIA study. The TOR was issued vide letter No. J-11015/227/2015/IA-II dated 11.08.2015 and it was valid up to 10.08.2018.

The PP applied for extension of TOR validity on 02.11.2018 i.e. after the expiry of validity of TOR. However, as per the OM J-11013/41/2006-IA-11 (I) (Part) dated 29.08.2017; the PP application for extension of validity of TOR will need EAC consideration. Therefore, the project proposal was placed in the EAC meeting held on 22-23 January 2019. Based on the information furnished and presentation made by the PP and discussions held, the Committee **recommended** for extending the TOR validity for a period of one year from the date of expiry i.e. 11.08.2018 to 10.08.2019.

(2.39). Appraisal of Replenishment Study Report prepared for EC granted to M/s Mahadev Enclave Pvt. Ltd. by SEIAA, Bihar in pursuance of the Hon'ble Supreme Court Order dated 22.11.2018 [WP(C) 11808 of 2016 in the matter of Aman Kumar Singh Vs. State of Bihar & Ors.]

The Hon'ble Supreme Court in its Order dated 22.11.2018 [WP(C) 11808 of 2016 in the matter of Aman Kumar Singh Vs. State of Bihar & Ors directed MoEF&CC to take decision on the replenishment study report prepared for the 19 mining lease for which ECs were granted by SEIAA, Bihar to M/s Mahadev Enclave Pvt. Ltd.

It is informed to the Committee that SEIAA Bihar has granted Environmental Clearance to 19 mining leases of M/s Mahadev Enclave Pvt. Ltd.during 2016. The Consultant M/s Overseas Min-Tech Consultants conducted replenishment study for the said mining lease. The details of EC and Quantity as estimated in Replenishment Study Report are as follows:

Sr. No.	EC No.	Date	Period	Gross Area of river under mining (sqm)	Drainage Density (m)	Catchment Area (m2)	Average Depth (m)	Executable RBM m3 (Drainage Density x Catchment Area)
1	330	04.03.2016	Pre-Monsoon	2,00,000	5,243	106	2.5	555758
			Post-Monsoon	2,00,000	5,998	106	2.5	635788
			Difference					80030
2	410	04.03.2016	Pre-Monsoon	39000	2609	70	3	182630
			Post-Monsoon	39000	2798	70	3	195860
			Difference in Volume					
3	379	04.03.2016	Pre-Monsoon	25000	1892	145	3	274340
			Post-Monsoon	25000	1875	145	3	268830

			Difference					5510
4	323	04.03.2016	Pre-Monsoon	120000	4213	102	3	429726
			Post-Monsoon	120000	4243	102	3	432786
			Difference in Volume					3060
5	328	04.03.2016	Pre-Monsoon	25000	890	75	2.5	66750
			Post-Monsoon	25000	1290	75	2.5	96750
			Difference					30000
6	334	04.03.2016	Pre-Monsoon	41000	2531	76	3	192356
			Post-Monsoon	41000	2568	76	3	195165
			Difference in Volume					2809
7	335	04.03.2016	Pre-Monsoon	45000	2699	88	3	237512
			Post-Monsoon	45000	2699	88	3	237512
			Difference in Volume					0
8	220	04.03.2016	Pre-Monsoon	41000	2052	117	3	240084
			Post-Monsoon	41000	2085	117	3	243945
			Difference in Volume					3861
9	326	04.03.2016	Pre-Monsoon	36000	2921	124	3	362204
			Post-Monsoon	36000	2921	124	3	362204
			Difference in Volume					0
10	325	04.03.2016	Pre-Monsoon	48900	2956	72	3	212832
			Post-Monsoon	48900	2996	72	3	215712
			Difference in Volume					2880
11	355	04.03.2016	Pre-Monsoon	28000	2010	92	3	184920
			Post-Monsoon	28000	2075	92	3	190900
			Difference in Volume					5980
12	324	04.03.2016	Pre-Monsoon	40000	1299	99	3	128601
			Post-Monsoon	40000	1359	99	3	134541
			Difference in Volume					5940
13	336	04.03.2016	Pre-Monsoon	180000	5421	112	3	607152
			Post-Monsoon	180000	5476	112	3	613312
			Difference in Volume					6160
14	354	04.03.2016	Pre-Monsoon	23000	1583	156	3	246948

			Post-Monsoon	23000	1600	156	3	249600
			Difference in Volume					2652
15	327	04.03.2016	Pre-Monsoon	15000	1154	77	3	88858
			Post-Monsoon	15000	1154	77	3	88858
			Difference in Volume					0
16	332	04.03.2016	Pre-Monsoon	160000	4003	108	2.5	432324
			Post-Monsoon	160000	4059	108	2.5	438372
			Difference in Volume					6048
17	337	04.03.2016	Pre-Monsoon	28000	2421	114	3	275994
			Post-Monsoon	28000	2486	114	3	283404
			Difference in Volume					7410
18	331	04.03.2016	Pre-Monsoon	200000	5832	111	3	647352
			Post-Monsoon	200000	5865	111	3	651015
			Difference in Volume					3663
19	329	04.03.2016	Pre-Monsoon	29000	2204	88	2.5	193952
			Post-Monsoon	29000	2204	88	2.5	197032
			Difference in Volume					3080

The Projects Proponent along with the consultant were present during the meeting wherein the Consultant presented the replenishment study report prepared for the F.Y 2017-18 & 2018-19. Based on the discussion held and documents submitted the Committee has the following observations:

- a) The Consultant informed the Committee that the replenishment study report prepared for the F.Y 2017-18 is not based on the actual data collected in the field rather it is based on Cartosat-1 DEM data taken from Bhuvan Portal and by using Remote Sensing Techniques (Arc GIS 10.3.1 & Erdas imagine 2014 software). The Committee observed that PP has calculated the Executable RBM in cubic meter (m³) by using the formula [Drainage Density (m) x Catchment Area (m²)]. But the formula for calculation of Drainage Density (m⁻¹) is [length of river (m) /catchment area (m²)]. Thus, the Committee is of the view that above calculation of will give the length of river not the volume of material deposited. Further, this report did not provide any detail about the section/locations on which there is an aggradation of RBM or Erosion of RBM. The Committee is of the view that without knowing the area where there is an aggradation of the RBM and in what quantity, how PP has planned its excavation activity. The Committee also observed that there are calculation mistakes in so called volume of Executable RBM mentioned in the Replenishment Report of the ECs granted vide Letter No 379 dated 14.03.2016, Letter No 334 dated

14.03.2016 and Letter No 329 dated 14.03.2016. **Thus, Committee thus did not accept the Replenishment Study Report as it does not give complete insight of the material replenished in the mining lease during the said period.**

- b) The Committee also observed that PP previously applied for Term of Reference (ToR) to the MoEF&CC for total mining lease area 284 Ha. The ToR was issued to the PP vide LR No. J-11015/95/2015-IA. II (M) dated 25.05.2015. The PP thereafter did not apply to the Ministry for grant of Environmental Clearance (EC) rather applied to SEIAA, Bihar for grant of EC. The SEIAA, Bihar considered these projects as B2 project and granted EC. The Committee observed that although the individual sections of mining lease are less than 50 Ha but for considering them as individual mining lease a separate letter of intent, separate mining plan, a separate EC and separate lease deed is required. But in the instant case there is only one letter of intent, one mining plan for all the 19 leases. Further the agreement submitted by the PP did not mention about the mining lease area. The Committee also observed that the KML file submitted by the PP during 2015 is not same as what is submitted now. **Due to this Committee was of the view that Ministry should invite Member Secretary SEIAA, Bihar and Director Mines & Geology, Bihar in the next meeting to discuss on this issue before arriving at any conclusion.**
- c) The Committee also observed that PP has submitted the past production details duly authenticated by Mining Officer, Banka. As these figures are year wise thus it is difficult to draw any conclusion. **The Committee thus asked the PP to submit the month wise details of the past production (till Jan-2019 since inception of the mines) duly authenticated by concerned mining department in Tonne, Cubic Meter and Cubic Feet.**
- d) The consultant also informed the Committee that for replenishment study report prepared for the F.Y 2018-19 the data was collected in the field by using DGPS and based on the post & pre-monsoon level volume is calculated. The Committee observed that although PP has provided the CSV data file but did not provide the section wise calculation of the reserves. **Thus, the Committee is of the view that to examine the replenishment study report for the year 2018-19, the section wise quantity estimation, month-wise production data is required. Thus, PP shall submit the same to the Ministry along with dates on which pre-monsoon & post monsoon survey was carried out and date of submission of the report to the Project Proponent.**

Based on the discussion held and document submitted by the PP, the Committee is of the view that **PP should submit the complete information within 15 days and Ministry shall place this proposal in the next EAC meeting scheduled to be held during 20,21 February, 2019. The Committee also asked the Ministry to inform Member Secretary SEIAA, Bihar and DMG, Bihar to present during the next meeting to give more insight on the issue.**

The Committee therefore **deferred** the proposal and asked the Member Secretary, to place it as agenda item No.1 for next EAC Meeting.

The meeting ended with thanks to the Chair.

Standard Terms of Reference (TOR) for Mining Project

- 1) The TOR will not be operational till such time the Project Proponent complies 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) Department of Mining & Geology, State Government shall ensure that mining operation shall not commence till the entire compensation levied, 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 the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- 3) Year-wise production details since 1993-94 should be given, clearly stating the highest production achieved in any one year prior to 1993-94. 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. The production details need to submit since inception of mine duly authenticated by Department of Mines & Geology, State Government.
- 4) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 5) 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.
- 6) 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).
- 7) 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.
- 8) 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.
- 9) 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.
- 10) 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.
 - 11) 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.
 - 12) 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.
 - 13) 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.
 - 14) 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.
 - 15) 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.
 - 16) 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.
 - 17) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
 - 18) 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.
 - 19) 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.
 - 20) 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.

- 21) 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.
- 22) 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).
- 23) 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.
- 24) 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.
- 25) 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.
- 26) 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.
 - 27) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
 - 28) 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.
 - 29) 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.
 - 30) 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.
 - 31) 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.
 - 32) 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.
 - 33) 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.
 - 34) 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.
 - 35) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
 - 36) 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.

- 37) 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.
- 38) 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.
- 39) 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.
- 40) 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.
- 41) 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.
- 42) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 43) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 44) A Disaster Management Plan shall be prepared and included in the EIA/EMP Report.
- 45) 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.
- 46) The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 and the action plan on the activities proposed under CER shall be submitted at the time of appraisal of the project included in the EIA/EMP Report.
- 47) The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M), dated 25.10.2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.
- 48) Compliance of the Ministry's Office Memorandum No. F: 3-50/2017-IA.III (Pt.), dated 30.05.2018 on the judgment of Hon'ble Supreme Court, dated the 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India needs to be submitted and included in the EIA/EMP Report.
- 49) 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.

Standard TOR for Beneficiation Projects

- 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 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.

- 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.

**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)



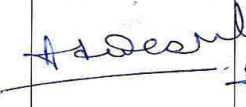





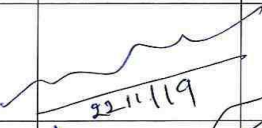
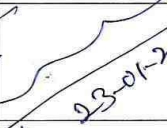
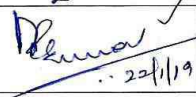




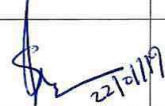
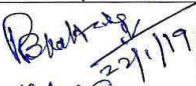
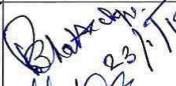
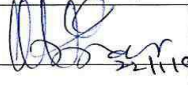
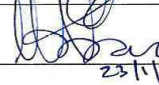
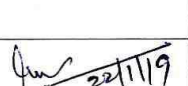
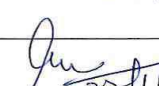

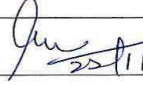
- 37) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual 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 MoEFCC.
- 40) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- 41) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

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

**ATTENDANCE OF 1ST RECONSTITUTED EXPERT APPRAISAL COMMITTEE
MEETING (NON COAL MINING SECTOR) HELD DURING JANUARY 22-23, 2019**

Sl. No	Name and address	Designation	22.01.2019	23.01.2019
1.	Dr. S.R. Wate, 148/149, Nagar Vikas Society, Narendra Nagar, Nagpur-440015, Maharashtra	Chairman		
2.	Dr. Ajay Deshpande, Flat A-101, Pristine Privilege Apartments, Near Rohan Nilay, Aundh, Pune-410007, Maharashtra	Member		
3.	Shri G.P. Kundargi, Plot No. 32, MOIL Vatika, Chicholi Road, Fetri, Nagpur 441501, Maharashtra	Member		
4.	Dr. A.K. Malhotra, C-6, Subhavna 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. 6-1-134/6, Balram Compound, Padmarao Nagar, Secunderabad-500025, Andhra Pradesh	Member		
7.	Dr. Asha Rajvanshi, WII, P.B# 18, Chandrabani, Dehradun-248001, Uttarakhand	Member		
8.	Prof. S. Ramakrishna Rao, D. No. 50-120-9/1, North Ext., Seethammadhara, 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 Maligaon, Guwahati-781011, Assam	Member		
11.	Prof. Mukesh Khare, Department of Civil Engineering, IIT, Delhi	Member		
12.	Representative of DGMS, Dhanbad, Jharkhand	Member		
13.	Shri Mantu Biswas, Chief Controller of Mines, IBM	Member		
14.	Shri V.K. Soni, Scientist 'E', IMD	Member		
15.	Dr. R.B. Lal, Additional Director IA Division, MoEF&CC	Member Secretary	